

FLIGHT

First Aero Weekly in the World.

Founder and Editor: STANLEY SPOONER.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

OFFICIAL ORGAN OF THE ROYAL AERO CLUB OF THE UNITED KINGDOM.

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EDITORIAL COMMENT.



WE have received a considerable amount of correspondence regarding our article, in last week's issue of "FLIGHT," under this heading. When we penned the article in question it was with the idea present in our mind that, although we and many others are firmly convinced that the solution of the problem of aerial supremacy is inseparably bound up with the policy we advocated, the subject is one which would very possibly lead to a good deal of controversy. It is certainly one to which there are two sides if one cares to go in search of arguments in favour of a retention of the present organisation, though we do not admit for a moment that any of the contentions which might be put forward in that direction are valid. But at least we had expected opposition from the vested interests and the advancement of specious arguments in favour of allowing the two Services to retain control of their own special branches. Somewhat to our surprise, therefore, we find that so

far the correspondence does not disclose a single note of opposition. On the contrary, some of our correspondents go even farther than we are prepared to go in the advocacy of a single Air Service. We need not follow the extremists—we set forth very clearly our own ideas on the subject, and these do not require elaboration. Further emphasis, however, they may need, and we intend to keep on hammering away at the subject until the whole question of Air Service organisation receives its proper meed of attention at the hands of the authorities responsible.

One letter which we have received sets forth the case very cogently and well, disposing of the single real objection which has ever been urged against the separation of the Air Service from the Navy and Army. That is that, if we had a separate and distinct Air Service, difficulty would be experienced in maintaining discipline when Air Service units were working with the Navy and Army. Our correspondent points out that this would not be so if the Air Service was put into a position exactly similar to that of the Royal Marines. When this Corps goes to sea it comes under Naval discipline, administered for the most part by its own officers. When working ashore it comes under military discipline, and when not working with either the Navy or the Army it "runs its own show." Under similar conditions, the Air Service would do exactly the same, supplying the Navy with the airships, seaplanes and aeroplanes it requires, its officers and men then being under Naval discipline, and the Army would be similarly supplied. Everything that could be accumulated over and above the Naval and Military requirements would go into offensive and defensive machines administered by the Air Service itself, and eventually this would become the largest and most important part of the Air Service. Our correspondent is of the opinion, in which we thoroughly concur, that we should aim at one single Air Service for the whole Empire, and start catching our young officers now, at the age of about 14, and so build up a proper Service, with its own traditions and its own *esprit-de-corps*.

We feel that we need add nothing much to these expressions of opinion, which are closely analogous to those set forth in nearly the whole of the correspondence we have received on the subject. They really follow in their main lines the ideas we enunciated last week. It has often been held that nearly all the criticism which has been directed against aerial policy in the past has been destructive and,

therefore, not particularly helpful to the powers that be. Here, then, is something which is most distinctly constructive and which does set up a case for clear thinking consideration. As we said last week, sooner or later we shall have to come to the separate Air Service. Therefore, why not sooner?

America and the War in the Air.

It is evident from the news that is allowed to come through from the United States that the feeling grows apace that the war can be, and will be, won in the air. We hear of gigantic appropriations of money for the building of an enormous aerial fleet, which is ultimately to carry the war into Germany and to teach the Hun something about "frightfulness" that he has hitherto mainly become acquainted with through its infliction on others. America's manufacturing resources are to be used to the full for the creation of this overwhelming air force, and already the training of pilots is proceeding apace. Unfortunately, all these things take time, and it will be in the spring of next year that we must look at the earliest for really effective American support. Then, doubtless, things will literally begin to hum, and the end of the present appalling strife will begin to come into sight.

There are two aspects of the American effort that intimately concern us here, over and above the great main consideration of United States aid in winning the war. The first is constructive. Our friends on the other side of the Atlantic will not, we are assured, take it amiss if we say that they have not developed the art of aircraft construction to the pitch it has attained over here under the stress of war conditions. The machines we and the French are using are unquestionably far more efficient and suitable for their purposes than anything that has hitherto been evolved in America. Therefore, as indeed we pointed out last week, America must be content for the time being to build to our designs and to take full advantage of our experience in the war. Not only must our best machines be copied, but our proved best engines must be taken as the models for American practice, because by the adoption of this policy many valuable months will be saved, with the corollary of much saving in human life and treasure. We do not know to what extent this policy is being followed, if it is being carried out at all, but it is unquestionably the best and shortest cut to speed victory. In the light of what has been openly said as to obstacles being placed in the way of such a policy by our own officials—though we hesitate to believe that *that* dog can lie in the manger now—it would be well if an announcement could be made, if only to the non-committal effect that the fullest co-operation is being offered by ourselves to America in the vital matter of aircraft construction.

The second point is that we must not allow ourselves to be influenced by any talk, or even of knowledge, of the full measure of future American assistance in the air to any slackening of our own efforts. We must keep well before us the fact that it will be another six months at least before America will be able to make her weight felt decisively—and a great deal can happen in six months. Rather must we do everything to increase and accelerate the production of aircraft. It is very evident that Germany has realised that the war can be won in the air and means to try to deliver a stupendous blow before our

American Allies can come into line. We do not want a repetition of the story of shells and submarines. The Government had ample warning of Germany's intentions in the matter of the U-boat campaign and, instead of taking time by the forelock and making preparations in time to deal with the menace when it became effective, it stuck its head in the sand and refused to believe that Germany could carry out her threat. It is true that the submarine campaign has failed in its object of starving us out, and we do not for a single moment believe it is likely to come even within measurable distance of doing so, but that is no thanks to the provision of our own Government, which waited for the danger to materialise before taking measures to combat it. The Germans have had bad luck with their enterprises up to now. They have certainly annoyed us considerably, and have inflicted a certain amount of loss both in the matter of life and property. But they have never come anywhere near to getting a decisive result for their efforts. That is not to say, however, that it will always be so—we cannot, dare not, continue to gamble with Fate as we have done in the past—and if Germany is really concentrating on war in the air, as we believe there are indications to show, then we also must concentrate, concentrate, concentrate. Much has been done, but much more remains to be done, and being warned in time it is up to the Government to take the necessary measures to meet the evil before it has assumed dimensions that may well be found formidable to the last extreme.

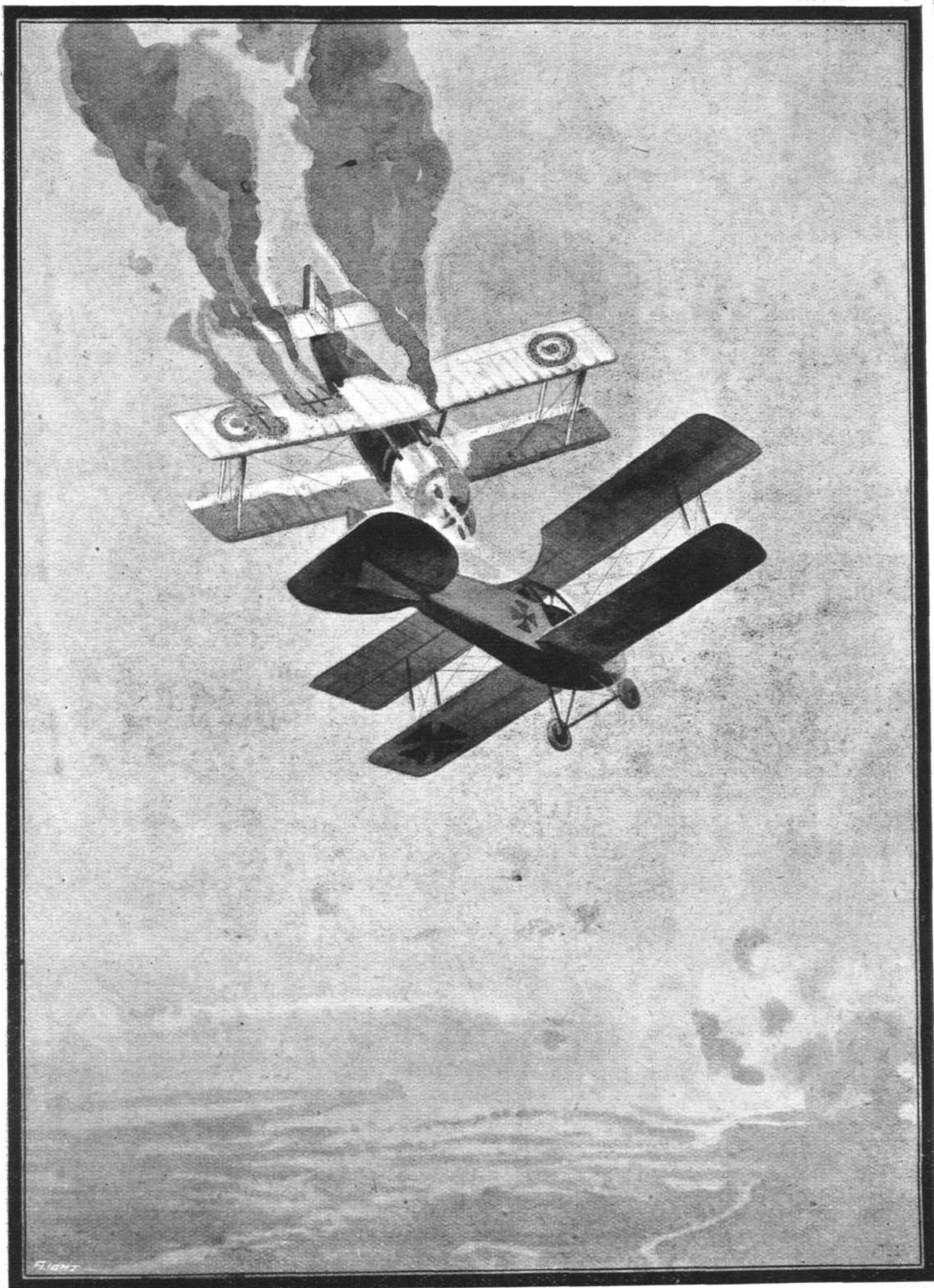
A Prophet with Honour.

It is not often that the prophet has only to wait for a short 48 hours to see the fruits of his prophecy materialise in fact. The writer of an article in the *Daily Mail* of the 5th inst., entitled "More Aeroplanes," had the doubtful satisfaction of seeing himself justified no later than Saturday morning! On the date named, the writer, Mr. de Halsalle, said:—

"I am no alarmist. At this critical period of the war I maintain that the alarmist deserves the severest form of punishment, not to say hanging. I cannot, of course, in these columns, state openly the source of my information; but I can say this: it comes indirectly from Germany, and from a certain highly placed official there who is not in the habit of letting his tongue wag idly. The official I speak of realises, as most Teutons realise nowadays, that the Zeppelin is doomed, so far as regards its military use anyway. He also realises only too well that the last aeroplane raid on London was highly 'successful,' considering the number of 'planes' employed. That raid, in Berlin, is looked upon as merely experimental. As an 'experiment' it greatly satisfied the Wilhelmstrasse; it has satisfied the German people, who believe that a vast fleet of aeroplanes raining bombs, first on London and then on other of our cities, will win for the *Vaterland* a speedy and conclusive victory.

"If, say, 15 aeroplanes can do such and such an amount of damage to British life and property, what can a raid by 50, 100 or 1,000 accomplish? This is the question that Berliners are asking one another to-day, and this is the question which is receiving more than due attention from the German Government. 'Let us send 1,000 aeroplanes over London,' said the *Cologne Gazette* a few days ago; 'let us set England ablaze from end to end.' Knowing so well the 'nature' of the pious, peaceful German I can hear those words re-echoing throughout the German Empire: 'Let us set England ablaze from end to end.'

"For, mind you, we are face to face with a very grave danger. If Germany sets to work assiduously to turn out aeroplanes in vast numbers (and there is no reason to suppose that she is incapable of the task), we have a pretty problem to face. Suppose that 50 German aeroplanes visited London to-night; have we an adequate aerial force ready to meet



A BRITISH PILOT'S DEATH-BLOW.—How the noted German pilot, Robert Mesinger died. According to the *Frankfurter Zeitung* the German had shot down four enemy machines before he met his own fate. The *Frankfurter Zeitung* added that during his last fight he succeeded in setting fire to the machine of his British opponent, but the latter, seeing that he was unable to escape death, rammed Mesinger's machine, with the result that both airmen fell to the ground.

them? I said 50 only; but suppose 100 came, nay, 500—have we looked ahead and provided for such a contingency? I fail to see from any official statement that the Government are awake to such a probability; I say 'probability' because I am convinced that wholesale air raids by aeroplanes will be Germany's next card."

We have quoted this article, not so much because of the prophecy—which we ourselves pronounced when we dealt with the first great raid on London—but because of the exact knowledge the writer professes to have of German intentions. There is no need for us to comment further on it, since we have given our warning of what we may expect in another article on this page of "FLIGHT." We warned the Government and the people what to expect, though we had perforce to go on probabilities. Here, however, is a writer who avers that he *knows*—and within two days he is justified by the greatest air raid on London since the beginning of the war. The inferences are clear to be read by the meanest intelligence.

Strikes and the War.

Sir J. Worthington Evans, Joint Parliamentary Secretary of the Ministry of Munitions, had some disquieting things to say at Manchester the other day. The recent strike in the engineering trade, he said, had delayed gun production and repair. Certainly they had several hundred guns less to-day than they would have had if no strike had taken place, and they could never overtake the loss. They would always, no matter how great the urgency, have lost guns just as truly as if they had been captured by the enemy. So also with aeroplanes. They lost output, and were weaker in consequence. Guns, aeroplanes, motors, tanks—lots of all of them—were still wanted for an overwhelming concentration all the way along the front. That made a further dilution of skilled labour with semi-skilled and unskilled labour absolutely necessary. There was no other way of obtaining the supplies that were called for. Dilution in private work in particular could not be avoided. He was sure no one would be content to let the fighting men go short, or to bring privation upon the country by letting the submarines get the command of the seas.

Skilled men had to be found for the essential things, but if they were taken from private work without dilution that meant that many of the firms doing private work would have to shut up.

Dilution of labour, as we have repeatedly pointed out, is the only way in which we can at one and the same time maintain an adequate supply of munitions for carrying on the war, and keep private trade and enterprise going in order to raise money to pay for it. We are afraid that this is an aspect which does not appeal to a very large section of the labour world, which is incapable of seeing farther than the immediate present. There is too much of a disposition in such quarters to regard the present glut of work and high wages in the munition businesses as something that is automatic and self-contained. They are incapable of seeing that if, as Sir J. Worthington Evans pointed out, the private workshops have to be shut down to provide skilled labour for the output of munitions it would mean ruin for whole industries. Moreover, with the virtual stoppage of private enterprise, the conditions of Government work would, we think, have to be drastically revised, and we might

even come to the condition of things which obtain in France, where practically every munition worker is a soldier and is paid and rationed accordingly. We are shrewdly of opinion that such a state of things would not appeal to the men who are willing to risk our success in the war for a paltry few shillings a week. To our way of thinking, the Government has been far too tender with certain of these gentry. A little less temporising and more of the strong hand would have done a lot of good. We have got to have the guns, the munitions and the aircraft, and if we cannot get them in one way we must in another. The whole country and the army is behind the Government in this, except the greedy minority of which we have spoken, and whether the offenders be employers or employed, they should have short shift.

Last Saturday's Air Raid.

Again London has been subjected to an attack from the air in broad daylight, and the pity of it is that the enemy was again able to inflict a considerable amount of damage to life and property and to get away practically unscathed. Four machines down out of a minimum number of raiders of twenty-two is not flattering either to our *amour propre* as a nation or to the efficiency of our defences against this kind of attack. Fortunately, the people of London, fortified by their experience in previous raids, neither lost their heads nor acted with the rashness that has been displayed in other raids, and, when the hostile machines appeared over the Metropolis, sought cover with commendable promptitude, with the result that although the raid was on a far larger scale than ever, the casualty bill was very much lower than in the raid of a month ago. The relatively small loss of life is the only satisfactory feature of the raid, if it is permissible to view with anything approaching satisfaction an enemy invasion of Britain, conducted with virtual impunity.

With regard to the several aspects of aeroplane raids on London, it seems to us that, under all the circumstances, the matter of warnings in case of threatened raids is one of the principal considerations upon which a decision has to be taken. After the previous daylight raid, we pronounced against warnings, for reasons which we then gave. Since then, and in the light of last week's experience, we are inclined to modify those opinions. We make no excuse either for our previous attitude or for our change of opinion. We have erred and repented in good company. After considering the question from every point of view, we have come to the conclusion that what is wanted is a system of giving "short warnings" in cases where it is obvious that London is the objective of hostile aircraft. A quarter of an hour would be ample for all purposes, and there should be no difficulty in arranging for that. What it is desirable to avoid, and it was that difficulty which led us to pronounce against warnings, is a persistent cry of "Wolf!" when there is no wolf. We do not want London alarmed and kept for hours in a state of tension every time a hostile machine is reported halfway across the sea *en route* for the coast-line. So long as adequate precautions are taken against alarming the Metropolis unnecessarily, we conceive that the "short warning" system should be a good thing.

**Bomb
German
Towns.**

It is unfortunate that the Prime Minister was unable to see his way to discuss the matter of raids in general, and last Saturday's in particular, in open session of the House. We fully appreciate that there are facts and figures which cannot, in the interests of the country, be made public, but there are certain things the public, which is very intimately concerned with the question, desires to know and has a perfect right to be enlightened upon. For example, in the summary of Mr. Lloyd George's speech, issued by the Press Bureau, we are told that he was much impressed by the *sang froid* displayed by residents in the bombed areas when he visited them after the raid. But the official summary does not tell us whether he was equally impressed by the demand of the people for reprisals, though we have reason to know that wherever he went the word "reprisals" was in the air.

Our own attitude with regard to reprisals has been made abundantly clear in the past, and we see no reasons for modifying it now. We are told in so many words that we cannot spare the machines for raiding enemy towns. If that is so, how is it the enemy can spare them to raid London at a time when, we are told, he is hopelessly inferior in the air in France? Surely, he ought to be using every machine he has in the endeavour to redress the balance. The truth, of course, is that for the purposes of raids it is not necessary to permanently detach machines from the front. They are employed in raiding London to-day and in their normal work over the lines the day after to-morrow. The defence against raids, however, is an entirely different matter and means that large numbers of machines must be kept always on hand to deal with raiders, because we do not know when the enemy's selected moment is likely to fall. Now, on the principle that it is a poor rule that does not work both ways, and knowing, as we do, that one of the principal objects of the Germans is to compel us to keep pilots and machines at home, a steady policy of counter-raids would surely impel the enemy to the like course of action. He would have to keep numbers of machines in the threatened area, unless he elected to let his civilian population and his munition factories take their chance, which is hardly likely. Therefore, it is fair to claim that raids on German centres would attain a salutary military effect. In addition, we are very strongly of opinion, for reasons we have given in previous articles on the subject, that if we administered to the Hun liberal doses of his own medicine there would be such a squeal from his own people that the game would speedily be voted to be not worth the candle. Up to the present we have had no satisfactory pronouncement from those in authority on the subject of reprisals. We trust that those members of the House who have made aerial matters their especial concern will continue to press for some definite statement. What the nation wants to know is whether, after allowing every latitude for military necessity and requirements, we are going to take these raids lying down, and if so why, or whether we are going to carry the war into the enemy's own country?

**The Failure
of the
Defence.**

When all the reasons have been given and the excuses made, so far as the Government can be persuaded to give the one and make the other, the fact stands out that in the last two aeroplane raids on

London the defence has failed deplorably. We acknowledge that it is not possible to provide at the moment all the machines that are necessary for the prevention of raids, without seriously depleting the armies in the field. We have, it is true, the best designs both in machines and engines, and it is probably true that, class for class, our individual machines are better than the Germans can show, but it is equally true that our present manufacturing facilities are not on a sufficiently large scale to provide all the machines we require for the front and at the same time to ensure an adequate number for home defence—that is, enough to make raids either impossible altogether or so risky that the enemy will not attempt them. Therefore, the army and its needs must come first and we at home must simply be content to carry on until, by increasing our manufacture of engines and machines—not forgetting the right sort—we have arrived at the condition predicated.

When this has been conceded, however, other things fall to be considered. Now, we know that, while we have not enough machines in this country to make raids out of the question, there ought to be no possibility, even with what we have, of a large aerial force being able to raid London and get back as far as the sea practically untouched. The question is, are the air defences of London so organised and controlled as to be of maximum effect under all the circumstances? We are afraid the answer is in the negative. We should like to know exactly what proportion of the machines detailed for the defence of London, were in the air in time to tackle the raiders. Let us make it clear that we do not for a single moment desire or intend to suggest that our airmen, as distinct from those in control, failed in their duty to the smallest degree—they made a gallant, if ineffectual, effort to deal with the enemy's attacking squadron, and the failure was no fault of their own. But we hear most disquieting reports of failure on the part of the higher command. We are assured that at certain stations on the outskirts of London machines were actually out of their hangars, engines running and all ready with their pilots to take the air, but that they were not allowed to go up until orders were given by superior authority and that those orders were not received until long after—many minutes, at least—the raid was over. If these statements are in fact true, then a most deplorable state of affairs is disclosed, amounting under the circumstances to criminal culpability. It is a point we hope to see raised in Parliament, and, further, we trust it will not be allowed to drop until a satisfactory answer is returned. If the system of transmitting the necessary orders is at fault, then the system must be changed without an instant's unnecessary delay. If it is the men at whose door the fault lies, they should be ruthlessly scrapped as incompetent. The report to which we have referred has obtained a wide currency and it must be thoroughly investigated. We can excuse shortcomings in our defensive system where shortcomings are unavoidable, but slackness or inefficiency in the use of what we have is absolutely unpardonable.

That there is a habit of holding back official information of an unpleasant character is very evident from the fact of the fatal ending to one of the R.F.C. officers who did attack, being entirely unreported until the inquest gave away the calamity.

ROYAL AERO CLUB OF THE U.K.

OFFICIAL NOTICES TO MEMBERS.

Club House.

The following prices have been fixed for the present by the Committee:—

Bedroom (including Bath)	.. 5s. each per night.
Breakfast 2s. 6d.
House Luncheon 2s. 6d.
House Dinner 3s. 6d.

Billiard Room.

The Billiard Room is now open for the use of the Members.

THE FLYING SERVICES FUND

administered by

THE ROYAL AERO CLUB.

The Flying Services Fund has been instituted by the Royal Aero Club for the benefit of officers and men of the Royal

Naval Air Service and the Royal Flying Corps who are incapacitated on active service, and for the widows and dependants of those who are killed.

The fund is intended for the benefit of all ranks, but especially for petty officers, non-commissioned officers and men.

Forms of application for assistance can be obtained from the Royal Aero Club, 3, Clifford Street, New Bond Street, London, W. 1.

Subscriptions.

Total subscriptions received to July 10th, 1917 £ s. d.
11,842 8 9

B. STEVENSON, Assistant Secretary.

3, Clifford Street, New Bond Street, W. 1.

THE ROLL OF HONOUR.

Reported by the Admiralty:—

Killed.

Flight Sub-Lieut. H. Allan, R.N.

Accidentally Killed.

Prob. Flight Off. H. J. Flynn, R.N.

Drowned.

F. 4373 1st Air-Mech. A. E. King, R.N.A.S.

Accidentally Injured.

Flight-Lieut. R. M. Clifford, R.N.

Slightly Injured.

Prob. Flight Off. A. E. Blaxhill, R.N.

Reported by the War Office:—

Killed.

Lieut. L. S. Bowman, R. Lancs. R. and R.F.C.

Lieut. D. M. Goodyear, R.F.C.

2nd Lieut. G. N. Hunstone, R.F.C.

2nd Lieut. G. P. Kay, R.F.C.

2nd Lieut. F. R. Martin, R. Scots Fus., attd. R.F.C.

Capt. G. Mountford, N. Staffs. Regt. and R.F.C.

2nd Lieut. J. E. Power-Clutterbuck, R.F.A., attd. R.F.C.

Lieut. C. Street, R.F.C.

2nd Lieut. B. Tootell, Sher. For. and R.F.C.

17018 Sergt. K. Bellerby, R.F.C.

26019 1st Air-Mech. F. Pearman, R.F.C.

Previously Missing, now reported Killed.

Capt. S. E. Cowan, M.C., R.F.C.

2nd Lieut. W. C. Crawford, R.F.C.

2nd Lieut. G. Doughty, R. Scots, attd. R.F.C.

Maj. L. G. Hawker, V.C., D.S.O., R.E., attd. R.F.C.

2nd Lieut. R. F. Kimbell, Hussars, attd. R.F.C.

2nd Lieut. E. L. Lewis, Essex R. and R.F.C.

Capt. A. G. Knight, R.F.C.

2nd Lieut. A. W. Reid, M.C., K.O.S.B., attd. R.F.C.

Capt. C. L. M. Scott, S. Staff. R., attd. R.F.C.

Capt. H. Spanner, R.F.C.

2nd Lieut. A. E. Watts, R.F.C.

Died of Wounds.

2nd Lieut. P. C. Ross, R.F.C.

2nd Lieut. R. V. Ryder, Glos. R., attd. R.F.C.

Lieut. T. E. Wylde, Norf. R. and R.F.C.

5524 1st Air-Mech. L. T. Brush, R.F.C.

8580 2nd Air-Mech. A. J. Holt, R.F.C.

44738 2nd Air-Mech. R. W. Stuckey, R.F.C.

11925 1st Air-Mech. L. E. Tucker, R.F.C., attd. R.G.A.

Died.

36992 2nd Air-Mech. P. Crocker, R.F.C.

51345 2nd Air-Mech. F. Poulter, R.F.C.

30029 1st Air-Mech. J. A. S. Taylor, R.F.C.

Accidentally Killed.

2nd Lieut. A. A. G. Grace, R.F.C.

Lieut. L. A. Wheatley, Sas. R., attd. R.F.C.

Previously Missing, now reported Missing, believed Killed.

Lieut. G. W. Devenish, R.F.A., attd. R.F.C.

Wounded.

2nd Lieut. C. L. De Beer, R.F.C.

2nd Lieut. A. C. Dent, Yeo., attd. R.F.C.

2nd Lieut. H. D. Duncan, R.F.C.

2nd Lieut. E. W. Hart, Cyc. Bn. and R.F.C.

Capt. W. T. F. Holland, Lcrs., attd. R.F.C.

Lieut. A. J. Macnab, A. and S.H., attd. R.F.C.

2nd Lieut. G. S. McGregor, R.F.C.

2nd Lieut. W. G. Nicholls, R.F.C.

2nd Lieut. N. D. Robinson, R.F.C.

Capt. A. B. Wright, High. L.I., attd. R.F.C.

Previously reported Prisoners, now reported Wounded and Prisoners of War in German hands.

2nd Lieut. J. G. H. Frew, R.F.C.

2nd Lieut. H. D. Hamilton, R.F.C.

2nd Lieut. C. B. Holland, R.F.C.

2nd Lieut. F. H. Wilson, R.F.C.

Previously Missing, now reported Wounded and Prisoners of War in German hands.

2nd Lieut. R. F. Adeney, Queen's (R. West Surrey R.), attd. R.F.C.

2nd Lieut. J. Toogood, R.F.C.

2nd Lieut. A. Watson, R.F.C.

Missing.

Lieut. D. J. de A. Bird, R.F.A. and R.F.C.

Capt. W. P. Holt, A.S.C. and R.F.C.

Lieut. M. Lowe, R.F.C.

Lieut. A. Leslie-Moore, I.A.R., attd. R.F.C.

Capt. N. G. McNaughton, M.C., R.F.C.

Lieut. A. H. Mearns, Black W., attd. R.F.C.

Lieut. D. C. G. Murray, R.E. and R.F.C.

2nd Lieut. F. E. Vipond, Man. R. and R.F.C.

Lieut. G. P. Simon, R.G.A., attd. R.F.C.

2nd Lieut. T. M. Sturgess, R.F.C.

170 Sgt. J. Dangerfield, R.F.C.

6396 Sgt. R. Dunn, R.F.C.

52315 2nd Air-Mech. E. D. Harvey, R.F.C.

28707 2nd Air-Mech. J. Walker, R.F.C.

Prisoner in German hands.

Lieut. G. S. Frame, R.E., attd. R.F.C.

Previously Missing, now reported Prisoners of War in German hands.

2nd Lieut. S. F. Allabarton, R.F.C.

2nd Lieut. R. S. L. Boote, R.G.A., attd. R.F.C.

Lieut. D. R. Cameron, R.F.C.

2nd Lieut. Count L. T. B. di Balme, R.F.C.

2nd Lieut. C. A. M. Furlonger, R.F.C.

2nd Lieut. G. C. T. Hadrill, A.S.C., attd. R.F.C.

2nd Lieut. N. B. Hair, R.F.C.

Lieut. J. B. Harvey, Cent. Ont. R., attd. R.F.C.

2nd Lieut. F. W. Illingworth, Scot. Rif., attd. R.F.C.

Lieut. F. W. Kantel, Can. F.A., attd. R.F.C.

2nd Lieut. C. W. Lane, K.R.R.C., attd. R.F.C.

2nd Lieut. R. M. Marsh, R.F.C.

Lieut. J. W. Shaw, R.F.C.

Lieut. T. M. Southorn, R.F.A. and R.F.C.

2nd Lieut. D. T. Steeves, R.F.C.

2nd Lieut. H. E. Waters, R.F.C.

Corrections:

Previously reported Missing, now reported Killed.

Capt. C. L. M. S. Scott, S. Staff. R., attd. R.F.C., should read
Capt. C. L. M. Scott, N. Staff. R., attd. R.F.C.

Reported Killed.

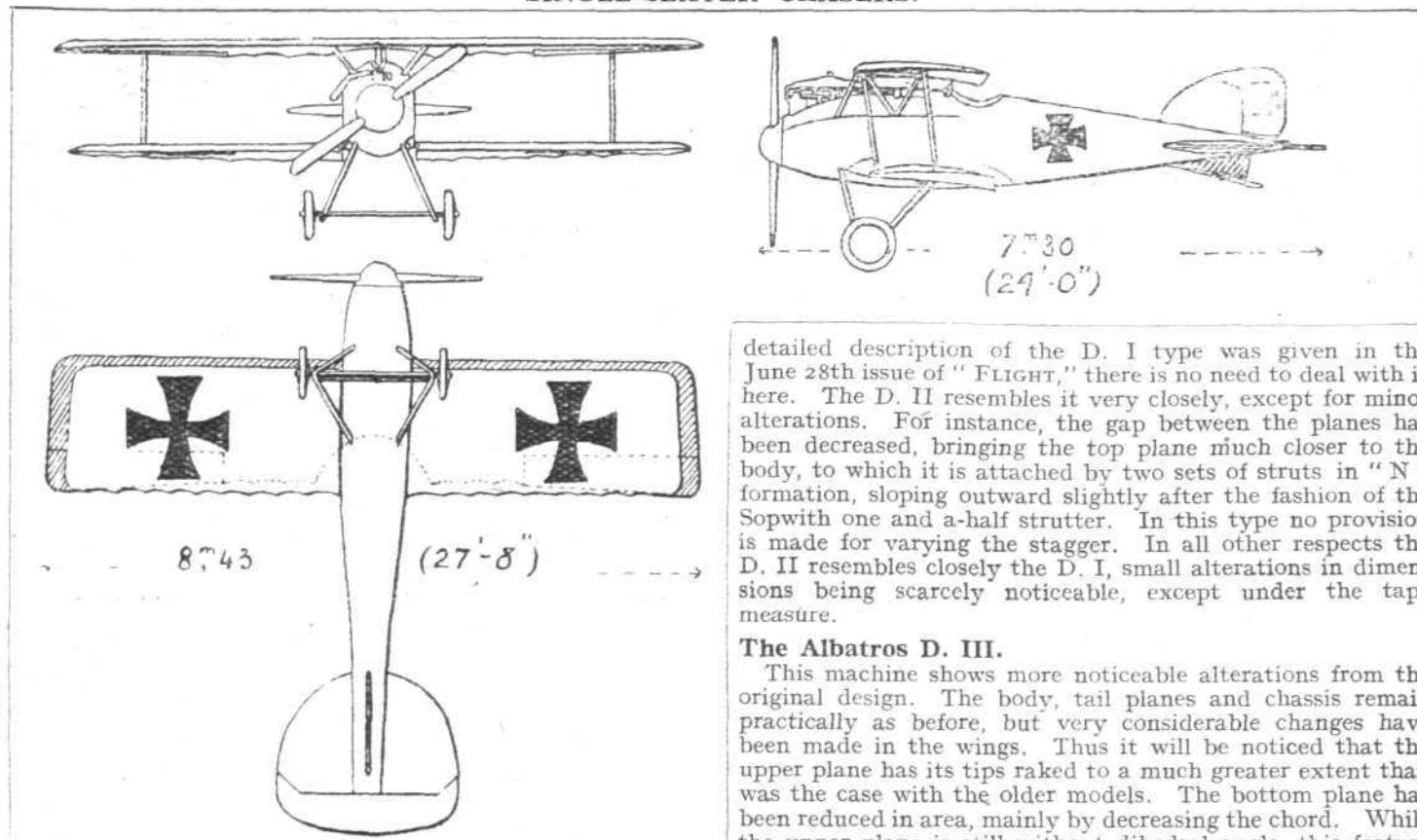
2nd Lieut. J. W. Eyton-Lloyd, R.F.A., should read
2nd Lieut. J. W. Eyton-Lloyd, R.F.C.

SOME 1917 TYPE GERMAN AEROPLANES.

SOME very interesting particulars of several of the latest German aeroplanes, which we publish below, are compiled by Mons. Jean Lagorgette. The drawings accompanying the article are in the majority of cases approximately correct as regards scale, and a brief description of each will, therefore, suffice to give an idea of the general characteristics, for the basis of which we are indebted to our contemporary, *L'Aerophile*.

This series is rendered all the more vitally interesting at the present moment on account of the fact that it includes, on page 700, scale drawings of the Gotha twin-engined biplane which took such a prominent part in the raid on London last Saturday. These scale drawings are, we believe, the first to be published in this country.

SINGLE-SEATER CHASERS.



The Albatros D. II.

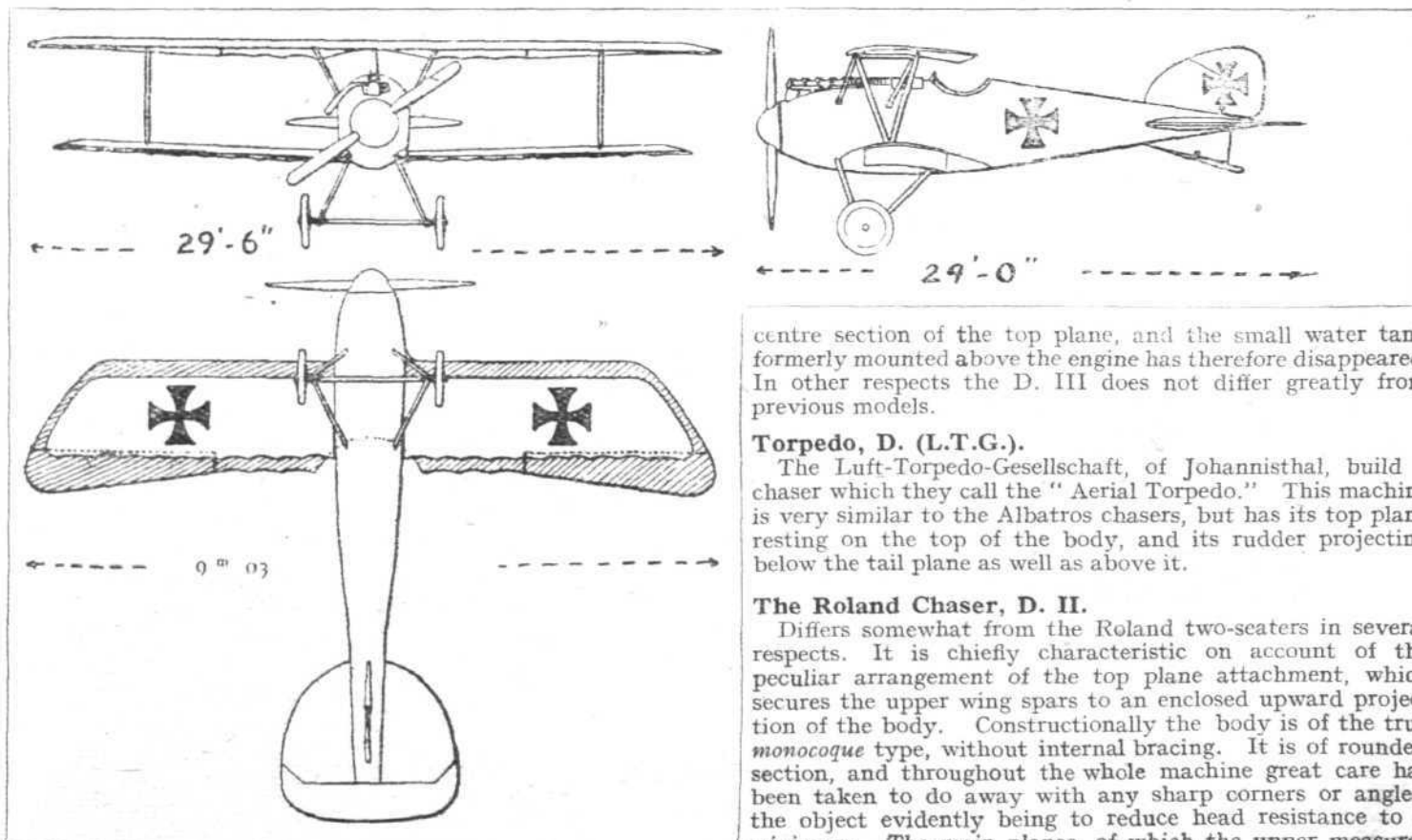
The Albatros D. I and D. II.

These machines are built by the Albatros works at Johannisthal, Berlin, and its various branches, and under licence by the Bavarian Aircraft Works at Munich. As a

detailed description of the D. I type was given in the June 28th issue of "FLIGHT," there is no need to deal with it here. The D. II resembles it very closely, except for minor alterations. For instance, the gap between the planes has been decreased, bringing the top plane much closer to the body, to which it is attached by two sets of struts in "N" formation, sloping outward slightly after the fashion of the Sopwith one and a-half strutter. In this type no provision is made for varying the stagger. In all other respects the D. II resembles closely the D. I, small alterations in dimensions being scarcely noticeable, except under the tape measure.

The Albatros D. III.

This machine shows more noticeable alterations from the original design. The body, tail planes and chassis remain practically as before, but very considerable changes have been made in the wings. Thus it will be noticed that the upper plane has its tips raked to a much greater extent than was the case with the older models. The bottom plane has been reduced in area, mainly by decreasing the chord. While the upper plane is still without dihedral angle, this feature has been employed for the lower plane, and the inter-plane struts are of the Vee formation familiar from the French Nieuport chasers. The attachment to the body of the top plane is by means of two struts on each side, sloping backwards and outwards. Instead of the small radiators mounted on the sides of the body, the radiator is mounted in the



The Albatros D. III.

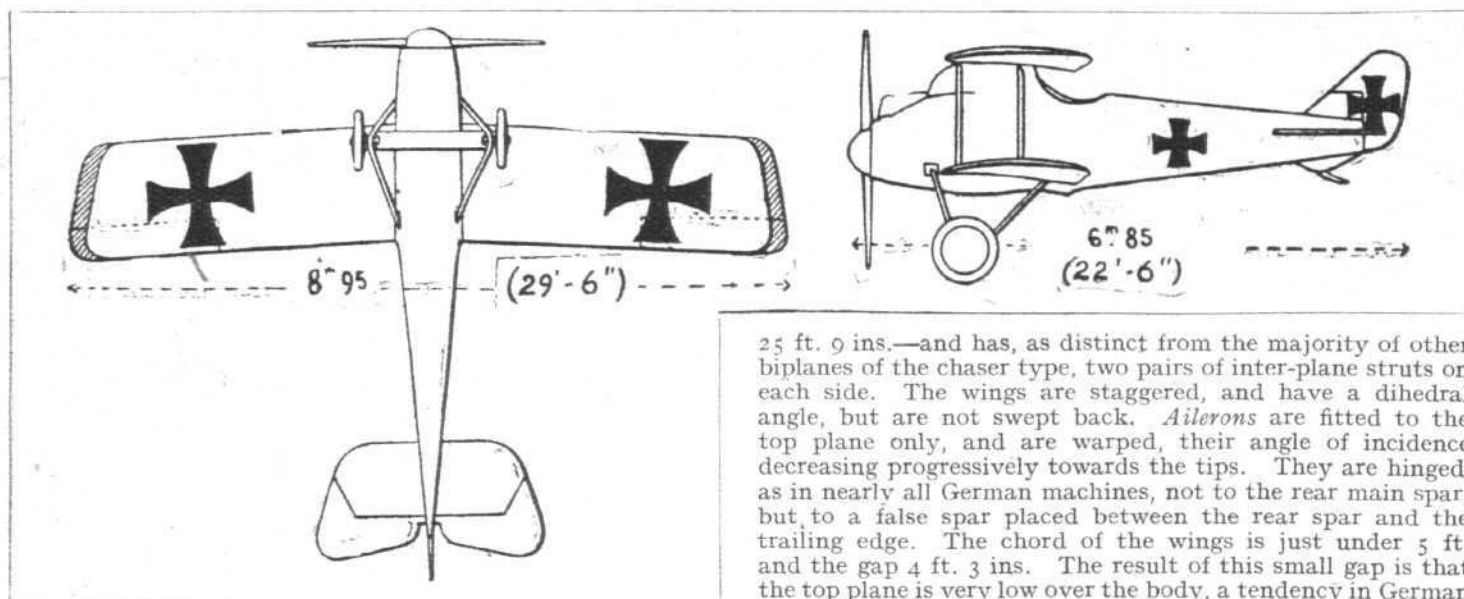
centre section of the top plane, and the small water tank formerly mounted above the engine has therefore disappeared. In other respects the D. III does not differ greatly from previous models.

Torpedo, D. (L.T.G.).

The Luft-Torpedo-Gesellschaft, of Johannisthal, build a chaser which they call the "Aerial Torpedo." This machine is very similar to the Albatros chasers, but has its top plane resting on the top of the body, and its rudder projecting below the tail plane as well as above it.

The Roland Chaser, D. II.

Differs somewhat from the Roland two-seaters in several respects. It is chiefly characteristic on account of the peculiar arrangement of the top plane attachment, which secures the upper wing spars to an enclosed upward projection of the body. Constructionally the body is of the true monocoque type, without internal bracing. It is of rounded section, and throughout the whole machine great care has been taken to do away with any sharp corners or angles, the object evidently being to reduce head resistance to a minimum. The main planes, of which the upper measures 29 ft. 6 ins. and the lower 28 ft. span, have no dihedral, but

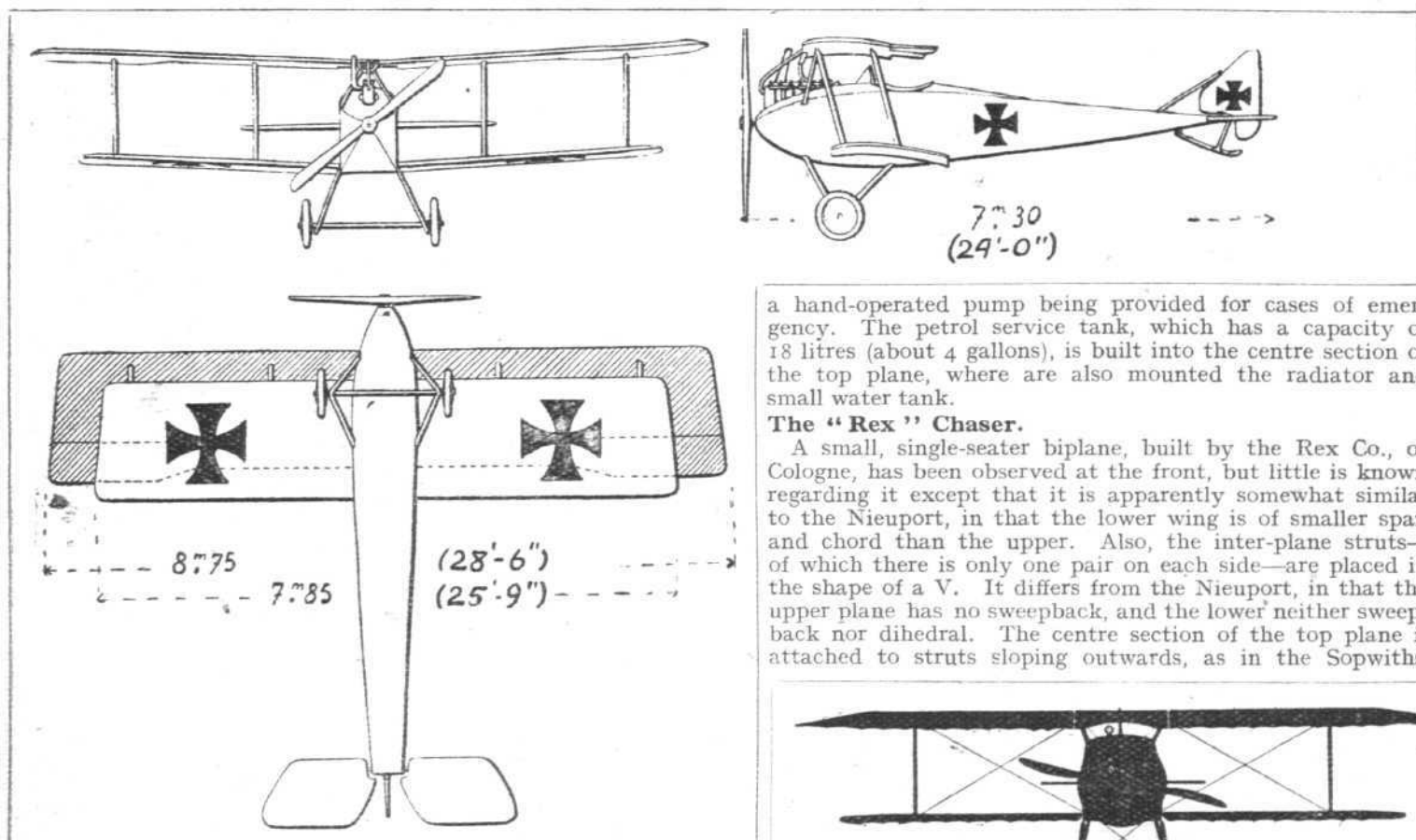


The Roland chaser D. II.

are swept back as was once the custom in a large number of German aeroplanes. *Ailerons* are fitted to the top plane only, and are operated Nieuport fashion by cranks on tubes running along the rear spar. The chord of both planes is the same, 4 ft. 9 ins. The stabilising plane and the vertical fin

25 ft. 9 ins.—and has, as distinct from the majority of other biplanes of the chaser type, two pairs of inter-plane struts on each side. The wings are staggered, and have a dihedral angle, but are not swept back. *Ailerons* are fitted to the top plane only, and are warped, their angle of incidence decreasing progressively towards the tips. They are hinged, as in nearly all German machines, not to the rear main spar, but to a false spar placed between the rear spar and the trailing edge. The chord of the wings is just under 5 ft. and the gap 4 ft. 3 ins. The result of this small gap is that the top plane is very low over the body, a tendency in German design that is very noticeable of late.

The engine usually fitted in the Halberstadt chasers is a 120 h.p. Argus 6-cyl. water-cooled. It has overhead valves, which are not, however, operated by an overhead camshaft as in the Mercedes, but by tappet rods and rockers, as in the Benz. The petrol tank, which also serves as a seat, has a capacity of 76 litres (about 17 gallons). The pressure in the tank is maintained by a pressure pump driven off the engine,



The Halberstadt chaser.

are covered with three-ply wood, and both rudder and elevator are partly balanced by triangular projections, as appears now to be the *mode* in Germany. The engine fitted is a 175 h.p. Mercedes, with the exhaust pipes bent outward and backwards as on the Albatros. The radiator is incorporated in the centre of the top plane. Two machine guns are fitted, one on each side of the engine, and, of course, with the usual interrupting gear. The weight of the machine empty is 1,450 lbs.

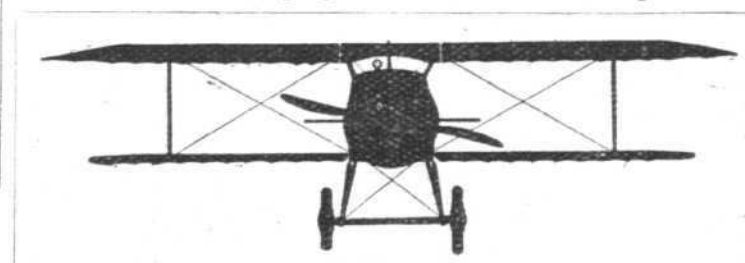
The Halberstadt Chaser.

Details of this machine are already familiar to readers of "FLIGHT" through an illustrated description which appeared in our issue of April 5th, 1917. We are now able to supplement the information then given by approximate scale drawings and other data from *L'Aerophile*. The Halberstadt chaser is a single-seater of short span—28 ft. 6 ins. and

a hand-operated pump being provided for cases of emergency. The petrol service tank, which has a capacity of 18 litres (about 4 gallons), is built into the centre section of the top plane, where are also mounted the radiator and small water tank.

The "Rex" Chaser.

A small, single-seater biplane, built by the Rex Co., of Cologne, has been observed at the front, but little is known regarding it except that it is apparently somewhat similar to the Nieuport, in that the lower wing is of smaller span and chord than the upper. Also, the inter-plane struts—of which there is only one pair on each side—are placed in the shape of a V. It differs from the Nieuport, in that the upper plane has no sweepback, and the lower neither sweepback nor dihedral. The centre section of the top plane is attached to struts sloping outwards, as in the Sopwiths.

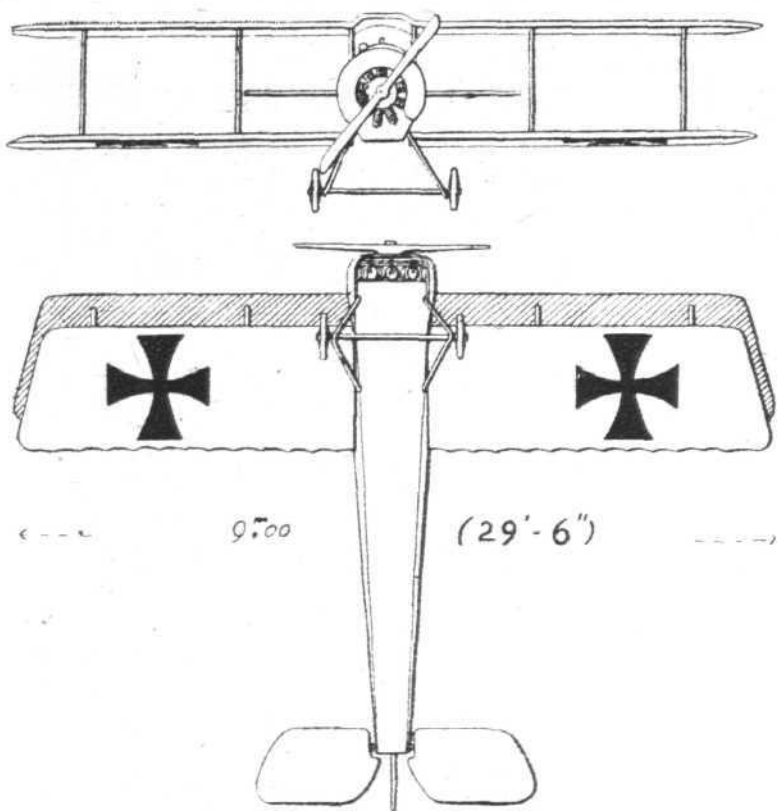


The Rex chaser.

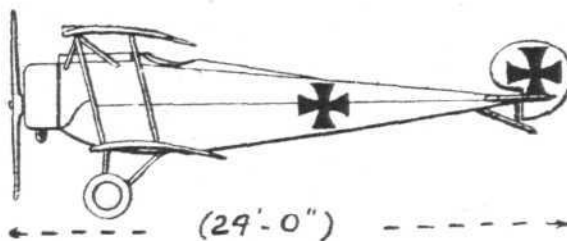
The body is of the *monocoque* type, built of three-ply wood, with projections for the attachment of the lower planes. In front view this machine appears approximately as shown in the accompanying silhouette.

The Fokker Chaser Biplane.

Two types of this machine have been turned out by the Fokker firm, one with a 100 h.p. rotary engine (Oberursel) and the other with a 175 h.p. Mercedes. No specimens of these machines have been captured—at least, not in a condition to provide much information—but photographs of one which landed in Switzerland give a good idea of the general arrangement. Both wings, upper and lower, are of equal dimensions as regards span and chord (29 ft. 6 ins. and



The Fokker chaser biplane.



4 ft. 10 ins. respectively). There is neither dihedral angle nor sweepback, but a fairly large stagger. The gap is small, bringing the top plane down almost to the upper *longerons* of the body. A low *cabane* of the Nieuport type connects the upper plane and the body. The centre section of the upper wing is raised above the rest of the plane so as to give the pilot a better view and facilitate getting into or out of the cockpit.

As in the Halberstadt, there are two pairs of inter-plane struts on each side, these consisting of circular section steel tubes streamlined with wood fairings. Lateral balance is maintained, not by means of *aileron*s as in practically all modern biplanes, but by the now obsolete method of warping the wings, the bracing being arranged accordingly.

The body is of the Morane type, of hexagonal section, with a slight turtle back, flattening out towards the rear. The rotary engine is overhung and partly covered in by an aluminium cowl. Above this and slightly to the right is mounted the synchronised machine gun. Occasionally two machine guns are carried, each slightly outward from the centre of the body.

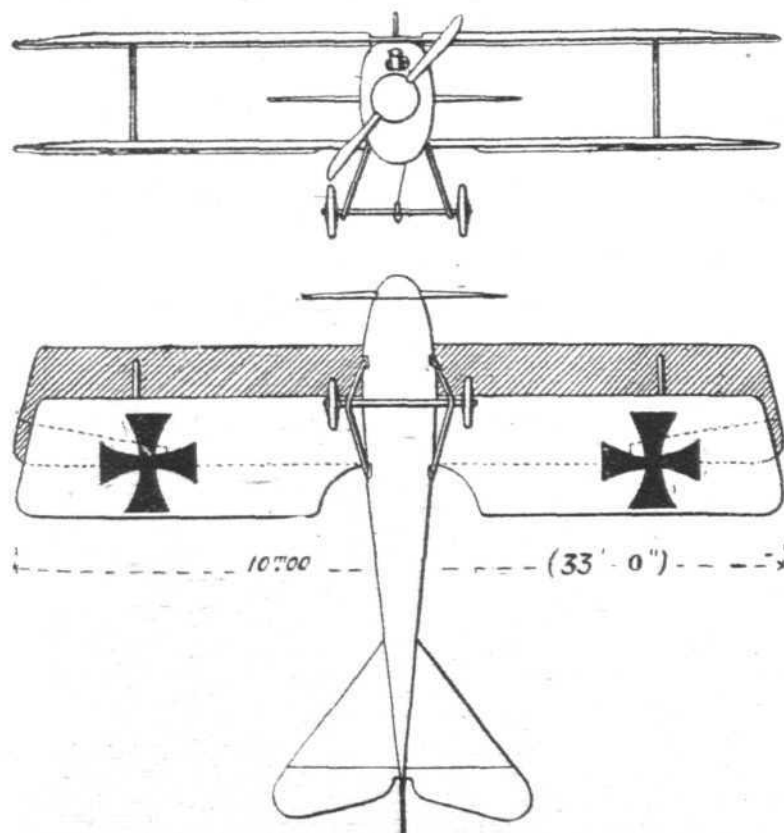
TWO-SEATERS (175 H.P.).

Of these, a considerable number have already been described in "FLIGHT" from time to time, and there is, therefore, no necessity to again deal with them here. Suffice it to mention that they are, for the greater part, of very similar design whatever the make, and are used for all sorts of purposes, ranging from reconnaissance to "spotting" and bomb dropping. Generally speaking the pilot occupies the front seat, having in front of him a synchronised machine gun; while the gunner, who is installed in the rear cockpit, is provided with a gun mounted on a turntable for firing in various directions. To this class belong the Albatros C. III, the L.V.G., the Rumpler and the Aviatik.

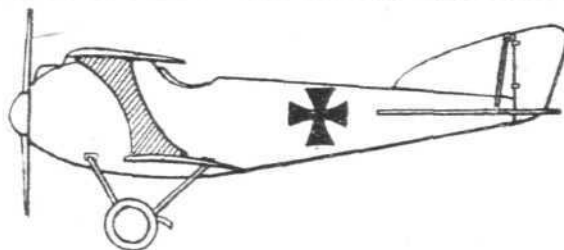
The Roland Two-seater.

Since the early days of German aviation the L.F.G. (Luft-Fahrzeug-Gesellschaft) firm have named their machines "Roland," this being the name of their chief designer. The modern Roland two-seater biplane is similar to the single-seater already described. It is considerably smaller than the other German two-seaters, the span being only 30 ft. Both wings are perfectly straight, the top one resting

on the roof of the body. On each side is a single inter-plane strut made of ply wood and of streamline section. This member serves the dual function of the usual pair of struts and of incidence wires. The planes are heavily staggered, so much so that the rear spar of the top plane is vertically above the front spar of the bottom plane. *Ailerons* are fitted to the upper wing only, and are peculiar in that they are hinged along a false spar, forming an angle with the two main spars.



The Roland two-seater.



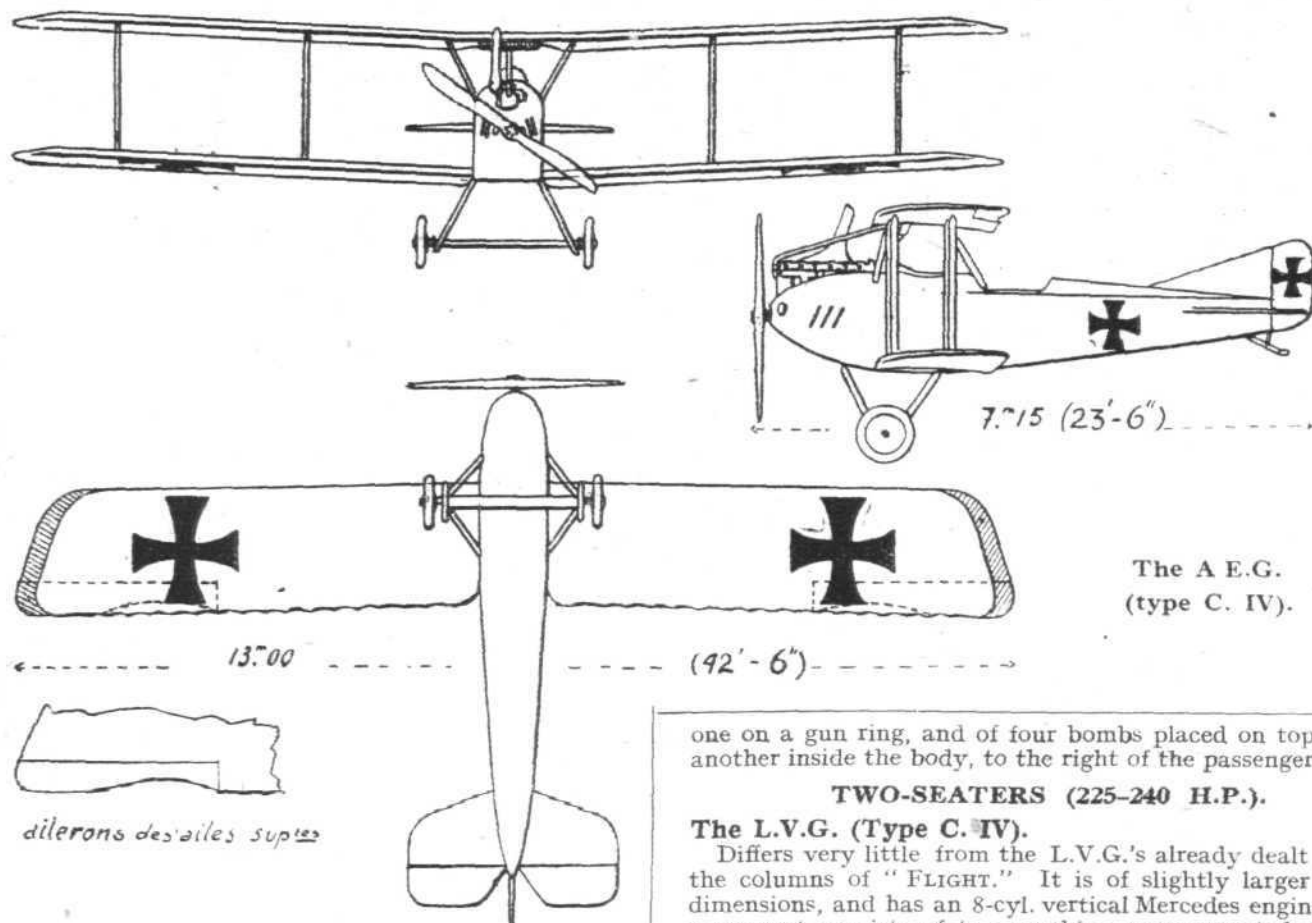
The body is of three-ply wood, rounded section, and is so deep in front that windows have been provided for the pilot and gunner (who occupies the rear cockpit). The engine is a 175 h.p. Mercedes, and the armament consists of two machine guns and under the body four bombs placed longitudinally.

The A.E.G. (Type C. IV).

The Allgemeine Elektrizitäts Gesellschaft build two types of machines—one a twin-engined biplane and the other an ordinary two-seater biplane with single engine. The wings of the single-engined machine, which, like all the A.E.G. machines, is built entirely of steel tube, are of 42 ft. 6 ins. span, so that the machine is a fairly large one. The wings are set at a small dihedral angle and also slope back slightly. There are two pairs of struts on each side, and the machine is remarkable for its exceptionally large gap between the planes.

The wings are built entirely of steel tube, with the exception of the leading edge and intermediate ribs. The *aileron*s, it will be seen from the sketch, are of rather peculiar shape, and form on that account a good guide for purposes of identification.

Like the rest of the machine, the body is built of steel tube, and is flat-sided except in front, where it is covered



The A.E.G.
(type C. IV).

one on a gun ring, and of four bombs placed on top of one another inside the body, to the right of the passenger.

TWO-SEATERS (225-240 H.P.).

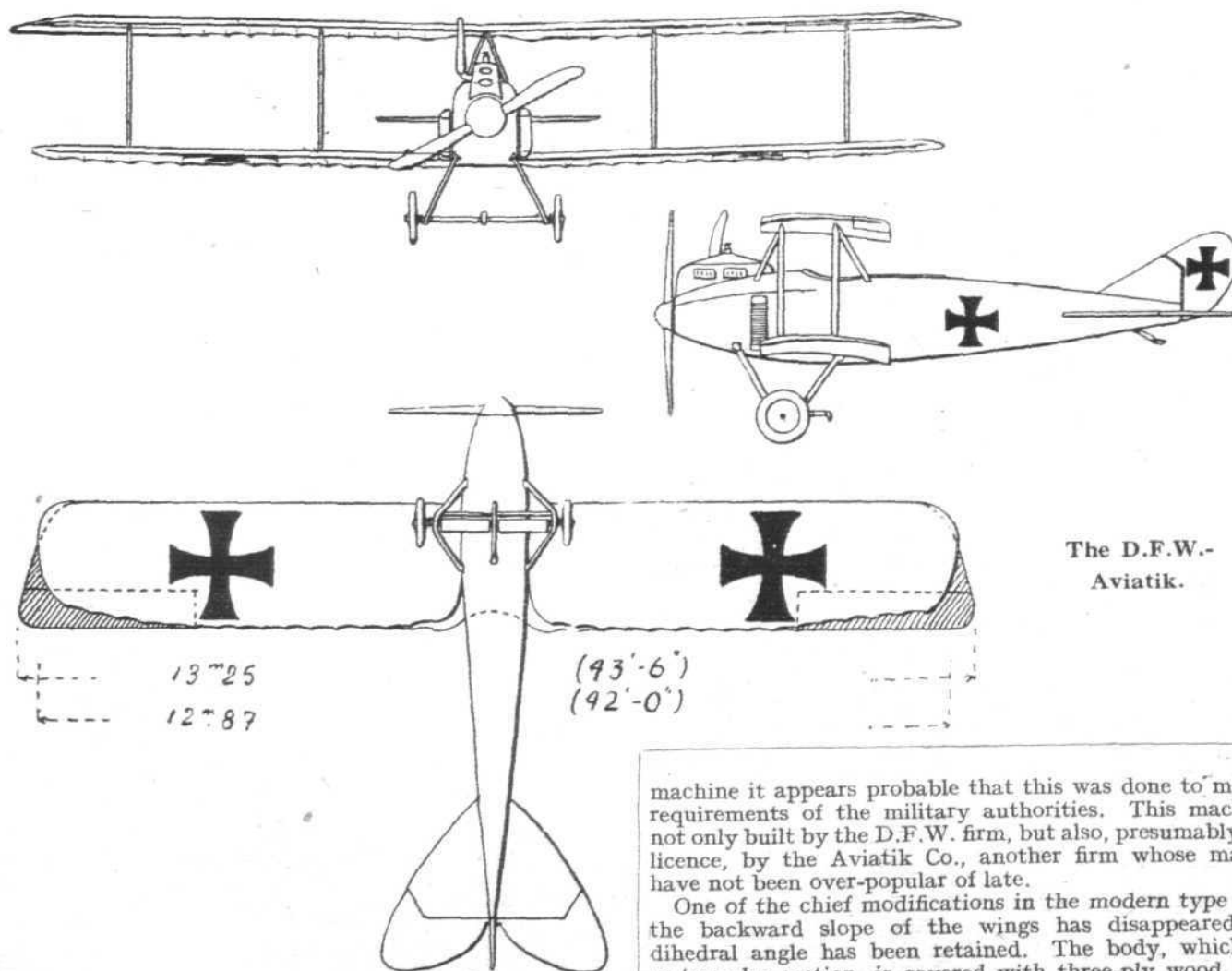
The L.V.G. (Type C. IV).

Differs very little from the L.V.G.'s already dealt with in the columns of "FLIGHT." It is of slightly larger overall dimensions, and has an 8-cyl. vertical Mercedes engine. The armament consists of two machine guns mounted as usual and of four bombs.

The D.F.W.-Aviatik.

Before the war the Deutsche Flugzeug Werke, of Lindenthal, Leipzig, produced exclusively machines of the Arrow type. Since the war this type has never been in great favour, and when the firm are now producing a slightly modified

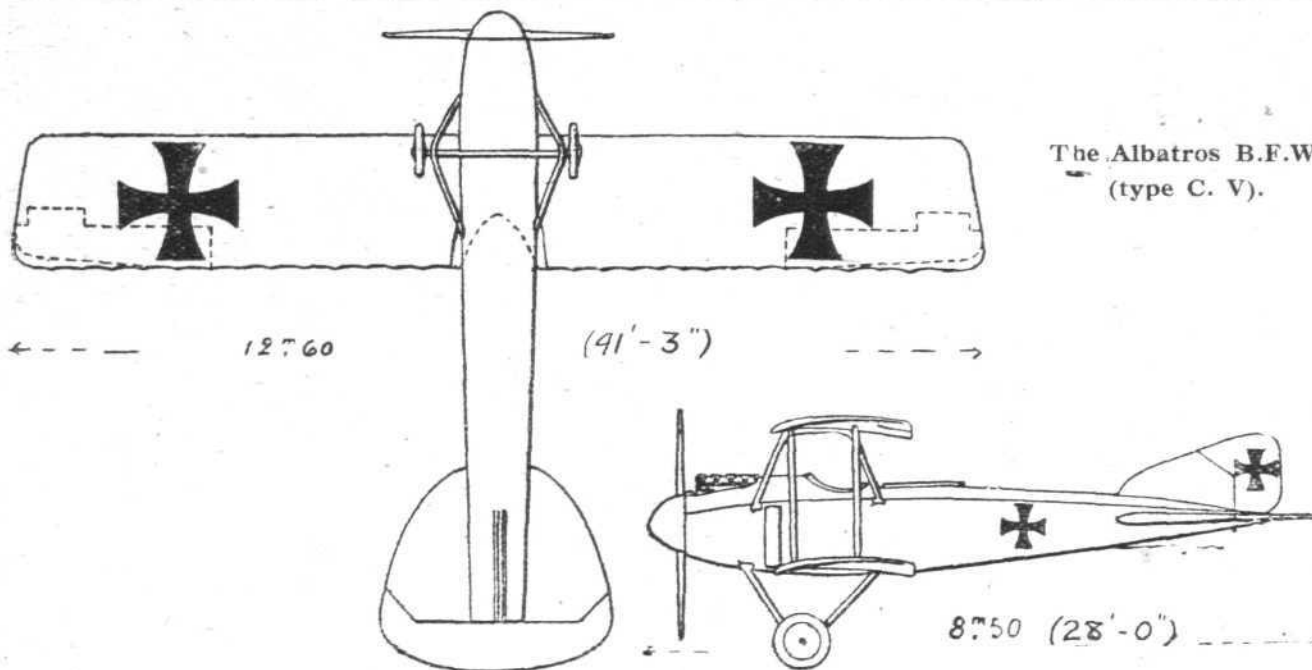
with three-ply and slightly rounded. The engine, a 175 h.p. Mercedes, is mounted on two longitudinal bearers of square section steel tube. The petrol service tank and radiator are incorporated with the centre section of the top plane, which is straight. The armament consists of two machine guns, the front one fixed and synchronised, the rear



The D.F.W.-
Aviatik.

machine it appears probable that this was done to meet the requirements of the military authorities. This machine is not only built by the D.F.W. firm, but also, presumably under licence, by the Aviatik Co., another firm whose machines have not been over-popular of late.

One of the chief modifications in the modern type is that the backward slope of the wings has disappeared. The dihedral angle has been retained. The body, which is of rectangular section, is covered with three-ply wood, and is



The Albatros B.F.W.
(type C. V).

very pointed, towards the nose, where it terminates in a "spinner," covering the propeller boss. The engine is a 6-cyl. Benz, developing 228 h.p. at 1,410 r.p.m. The standard complement of two machine guns is carried, and the bomb chamber will hold six bombs. The weight of the machine empty is 2,100 lbs.

Albatros B.F.W. 225 h.p. (Type C. V).

One of these machines, which was captured, had been

built at the Bavarian Aircraft Works, Munich, and is almost identical with the Albatros C. III, which has been illustrated in "FLIGHT." Only minor alterations are to be found, as, for instance, in the rudder and tail, which are similar in shape to those of the D. I. The ailerons, it will be seen from the sketch, are balanced by a portion projecting forward in an opening in the wing. The engine is a 6-cyl. vertical Benz, developing 225 h.p. (1,415 r.p.m.). There are two machine guns and two bomb chambers.

TWO-SEATERS (260 H.P.).

260 h.p. Rumpler.

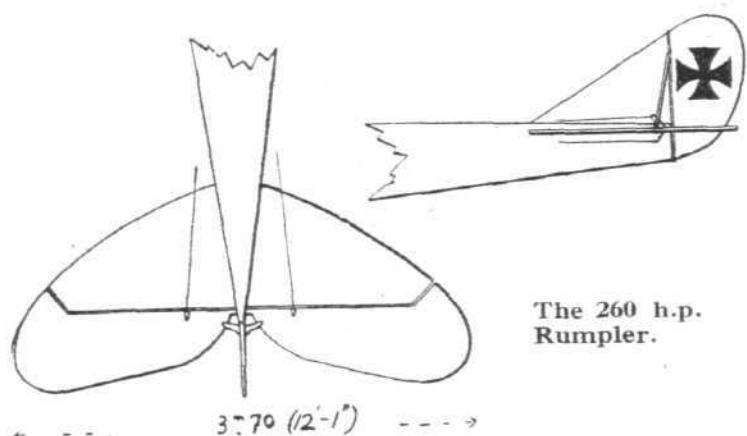
In the main the new 260 h.p. Rumpler two-seater follows along the lines of the older model illustrated in "FLIGHT." It has, however, a 260 h.p. Mercedes engine, and the shape of the tail planes has been altered somewhat, as shown in the sketches.

TWIN-ENGINE MACHINES, TYPE G. I AND G. II.

The Twin-Engine Gotha Three-seater, 520 h.p.

This machine will probably be found the most interesting of those included in this series, as it played such a prominent part in last Saturday's raid on London. In view of this fact we have given the drawings illustrating it rather more prominence than those of the other machines.

Although by far the largest of the German biplanes, the Gotha is not quite so large as our own Handley-Page biplanes, the sample of which, duly delivered to them at Lille, has undoubtedly provided the Germans with valuable data for their Gotha three-seater. As distinct from the Handley-Page, however, the Gotha has its propellers at the rear of the

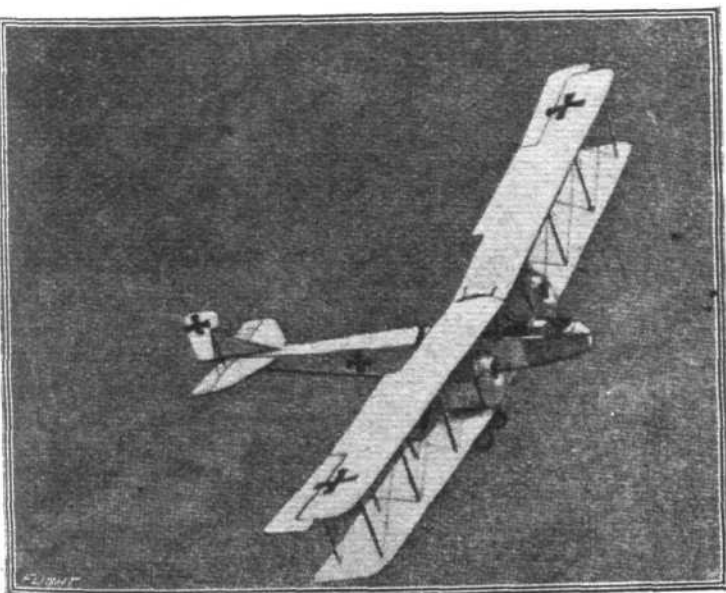


The 260 h.p.
Rumpler.

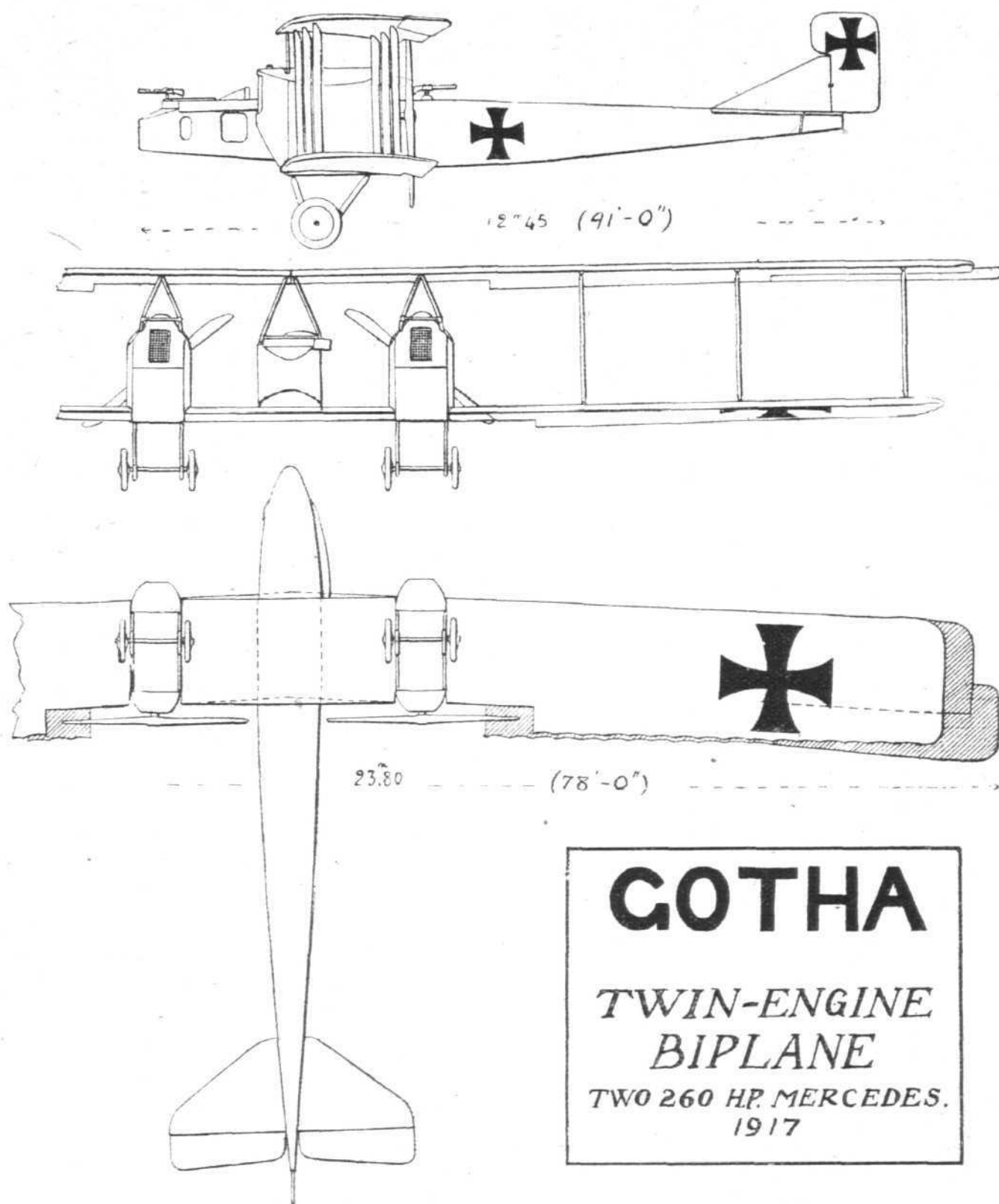
wings, and a considerable backward slope to the main planes. Also, the tail is of the monoplane type. The top plane is built up in two halves, attached to a central *cabane*, while the bottom plane is in three sections, one of which runs from the inner side of one engine housing under the *fuselage* to the inner side of the other engine housing. The main spars are of I section with three-ply flanges. Structurally the ribs are of little interest, but as they are at right angles to the spars they form an angle with the line of flight. This disposition also has the effect of offsetting the inter-plane struts, the front and rear ones of which are not in line. This is not shown in the sketch.

The shape of the tail surfaces can be seen from the illustrations, and they are chiefly remarkable from the fact that they are, as already pointed out, of the monoplane type. Their area is, therefore, very small as compared with that of the tail surfaces of the Handley-Page.

The long enclosed body is of rectangular section, and is covered with three-ply in front and with fabric at the rear. It is built up of four ash *longerons* and ash struts. The placing of the three occupants is rather peculiar, being unsymmetrical. If the gunner in the front cockpit is seated centrally in the body, the pilot is placed on the left-hand side with his controls, leaving an open space between him and the starboard wall of the *fuselage*. This space is, as a matter of fact, provided to form a passage from the front to the rear gunner. Behind the pilot are two bomb racks, while further back still is the cockpit for the second gunner. Two guns



The twin-engine Gotha in flight.

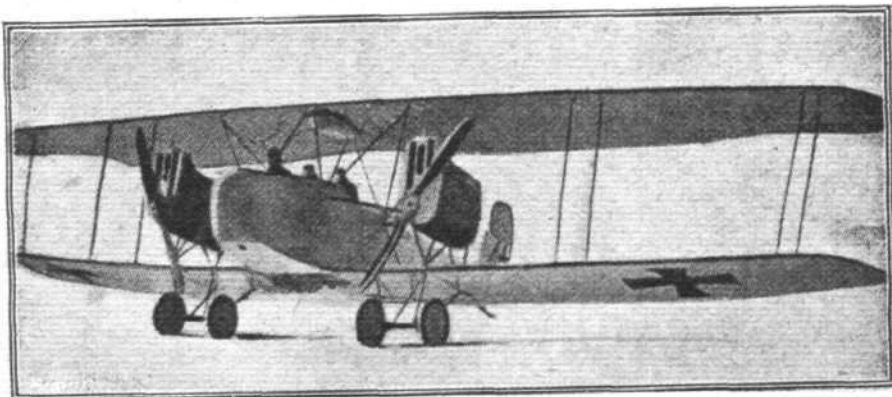


are within reach from this seat, one is placed above the body, while the other fires down through a tunnel sloping backwards and downwards from the cockpit, permitting of firing in that direction.

The undercarriage consists, briefly speaking, of two separate Vee chassis, one under each engine, and is, needless to say, built of streamline steel tubes. The engines themselves are housed in roomy nacelles resting on the bottom planes. They are 6-cyl. vertical Mercedes motors, each developing 260 h.p. at 1400 r.p.m. The cylinders, which are 160-bore by 180-stroke, are in two groups of three each. There are four overhead valves and two sparking plugs to each cylinder, and the usual overhead camshaft is employed. The radiators are mounted in the nose of the engine housing, and under them are placed the oil tanks. The main petrol tanks are situated below the engines.

The armament consists of three machine guns, one in front, capable of being fired in any direction within the hemisphere

limited to the rear by the wings. A second is mounted on a transverse rail almost touching the top of the fuselage,



The twin-engine A.E.G.

while a third can be fired downwards and backwards through a tunnel in the body. In addition, there are several bomb racks carrying a total of 14 bombs.

Twin-Engine A.E.G., 450 h.p.

It has already been mentioned that the Allgemeine Elektrizitäts Gesellschaft make a twin-engine biplane. This

machine, which is built entirely of steel, is fitted with two Benz or Mercedes engines of 225 h.p. each, placed in nacelles between the wings. The radiators are in the nose of the nacelles, as are also, in contradistinction to the Gotha, the air screws. The fuselage, which has seating accommodation for three occupants, projects a considerable distance ahead of the main plane.

Machine.	Type.	No. of Seats.	Span.		Gap.	Chord.	Length O.A.	Engine.	Total h.p.	No. of Guns.	No. of Bombs.
			Upper.	Lower.							
Albatros	D. II	1	27 8	26 3	4 2	5 3	24 0	Mercedes	175	2	0
Albatros	D. III	1	29 6	28 8	4 10	4 10	24 0	Mercedes	175	2	0
Torpedo	D	1	—	—	—	—	—	Mercedes	175	2	0
Roland	D. II	1	29 6	28 0	4 4	4 9	22 6	Mercedes	175	2	0
Halberstadt ..	D	1	28 6	25 9	4 3	4 10	24 0	Mercedes or Argus	120	2	0
Fokker	—	1	29 6	29 6	4 3	4 10	24 0	Mercedes or Oberursel	175	2	0
Rex	D. II	1	—	—	—	—	—	—	—	—	—
Roland	C	2	33 0	33 0	4 0	5 3	—	Mercedes	175	1	—
A.E.G. ...	C. IV	2	42 6	41 0	6 2	5 5	23 6	Mercedes	175	2	4
L.V.G. ...	C. IV	2	44 6	—	—	6 5	28 0	Mercedes	235	2	4
D.F.W. Aviatik	C. V	2	43 6	42 0	5 6	5 9	—	Benz	228	2	6
Albatros B.F.W.	C. V	2	41 3	40 0	5 10	5 10	28 0	Benz	225	2	4
Rumpler	—	2	—	—	—	—	—	Mercedes	260	2	6
Gotha	G. I	3	78 0	72 0	7 2	7 6	41 0	Two Mercedes ..	520	3	14
A.E.G. ...	—	3	—	—	—	—	—	Two Benz	450	2	—

"X" AIRCRAFT RAIDS.

IN view of the decision of the Government not to allow details of places visited by enemy aircraft to be published, we are, as before, giving to each one an index number. Eventually, when details are available, we shall give the respective information under these index numbers, which will facilitate easy reference to each particular raid.

"X 65" Raid (July 4th).

THE following official *communiqué* was issued by the Field-Marshal Commanding-in-Chief, Home Forces, and the Secretary to the Admiralty on July 4th:—

" 8.15 a.m.

" Enemy aeroplanes appeared over the Essex Coast about 7 a.m. Our anti-aircraft guns came into action. Some bombs have been dropped, but no details as yet have been received."

" 12.15 p.m.

" A squadron of some 12 to 14 enemy aeroplanes attacked Harwich from a north-easterly direction at about 7.5 a.m. this morning. A number of bombs were dropped, and the latest reports state that eight persons were killed and 22 injured. Only slight material damage was caused. Fire was opened from the anti-aircraft defences, and the enemy's formation was broken up, although low-lying clouds rendered visibility very bad. The raiders were also engaged by our own aircraft from a neighbouring station. After dropping their bombs the enemy's squadron turned seaward without attempting to penetrate inland. The whole raid only occupied a few minutes."

" 6.30 p.m.

" The latest police reports show that the casualties in to-day's air raid are now 11 killed and 36 injured."

" 7 p.m.

" The Vice-Admiral, Dover, reports that naval aircraft from Dunkirk intercepted the hostile squadron returning from England after the attack on Harwich this morning. An engagement ensued at a considerable distance from the Belgian Coast. Two of the hostile machines were brought down in flames, and a third was seen to be damaged. Several other machines were attacked with indecisive results. All our machines returned safely."

German Version.

" Berlin, July 5th.

" Yesterday morning one of our aeroplane squadrons attacked the military establishments and coastal works near Harwich, on the East Coast of England. In spite of the strong defence from the earth and by English aerial forces, we succeeded in dropping several thousands of kilogrammes of bombs on the objectives and in observing the good effects thereof. All our aeroplanes have returned undamaged."

[As the British Admiralty announced above, two of the German raiders were brought down.]

"X 66" Raid (July 7th).

THE following are the naval and military *communiqués* issued through the Press Bureau with regard to the air raid on July 7th:—

" Saturday (11.45 a.m.).

" At about 9.30 a.m. this morning hostile aircraft in considerable numbers, and probably in two parties, appeared

over the Isle of Thanet and the east coast of Essex. After dropping some bombs in Thanet the raiders proceeded in the direction of London, moving roughly parallel to the north bank of the Thames. They approached London from the north-east, then, changing their course, proceeded north and west, and crossed London from north-west to south-east. Bombs were dropped in various places in the metropolitan area. The number of raiding aeroplanes is at present uncertain, but probably about 20. They were attacked by artillery and by large numbers of our own aeroplanes, but reports as to the results of the engagements, as to damage, and casualties have not yet been received."

" 5.55 p.m.

" The enemy raiding squadron was chased by Royal Naval Air Service machines from this country and engaged 40 miles out to sea off the East Coast. Two enemy machines were observed to crash into the sea. A third enemy machine was seen to fall in flames off the mouth of the Scheldt. All our machines returned safely."

" One of the enemy machines was brought down by the R.F.C. and fell into the sea off the mouth of the Thames."

" Saturday, 8.4 p.m.

" Vice-Admiral, Dover, reports from Dunkirk:—

" On information being received that enemy aircraft were attacking England five flights were sent up to intercept them as they returned. The raiding enemy aircraft were not seen, but three enemy seaplanes were encountered and destroyed, and one enemy aeroplane was driven down into the sea and another enemy aeroplane driven down. The machines returned to replenish petrol and left again immediately. In the course of this patrol one enemy aeroplane was brought down in flames and another forced to land on the beach damaged near Ostend. During the course of their operations none of the raiding enemy aeroplanes was encountered, and it is thought highly probable that they returned near the Scheldt and over Dutch territory."

The total casualties reported by the police up to July 9th are as follows:—

	Men.	Women.	Children.	Total
" Killed: Metropolitan area	29	6	5	40
Isle of Thanet ..	1	2	0	3
				43
" Injured: Metropolitan area	98	44	52	194
Isle of Thanet ..	0	2	1	3
				197

German Version.

" Berlin, Sunday.

" On the morning of July 7th one of our aviation squadrons attacked London. At about 11 o'clock in the morning bombs were freely dropped on the docks, harbour works, and warehouses on the Thames. Fires and explosions were observed. One of the English aeroplanes which went up in defence was shot down over London. Also at Margate, on the east coast of England, bombs were dropped. Our aeroplanes all returned excepting one, which was compelled to make a descent in the sea, and could not be saved by our naval forces."

THE AIR RAID.

The Attacking Squadron.

A STATEMENT, on the air raid, made by a "high authority," which may be taken to represent the official view, was communicated to the Press on July 9th. It states:—

"A careful study of the information received during the raid shows that the number of raiding machines was 22. Various statements have been made in the Press and elsewhere as to the low height at which they were travelling. The height of aircraft from the ground is very difficult to estimate. To make a reasonably correct estimate the size of the machines must be known and the condition of the atmosphere must be taken into account. The pace of the aircraft must also be taken into consideration. The actual velocity, however, depends, not only upon the angular velocity, but upon the distance and height of the machine and its direction, whether crossing, approaching directly, proceeding directly, or moving obliquely. It will be readily understood that a machine flying at a height of 15,000 ft. may appear to be almost stationary, whereas it is really travelling at a high rate of speed.

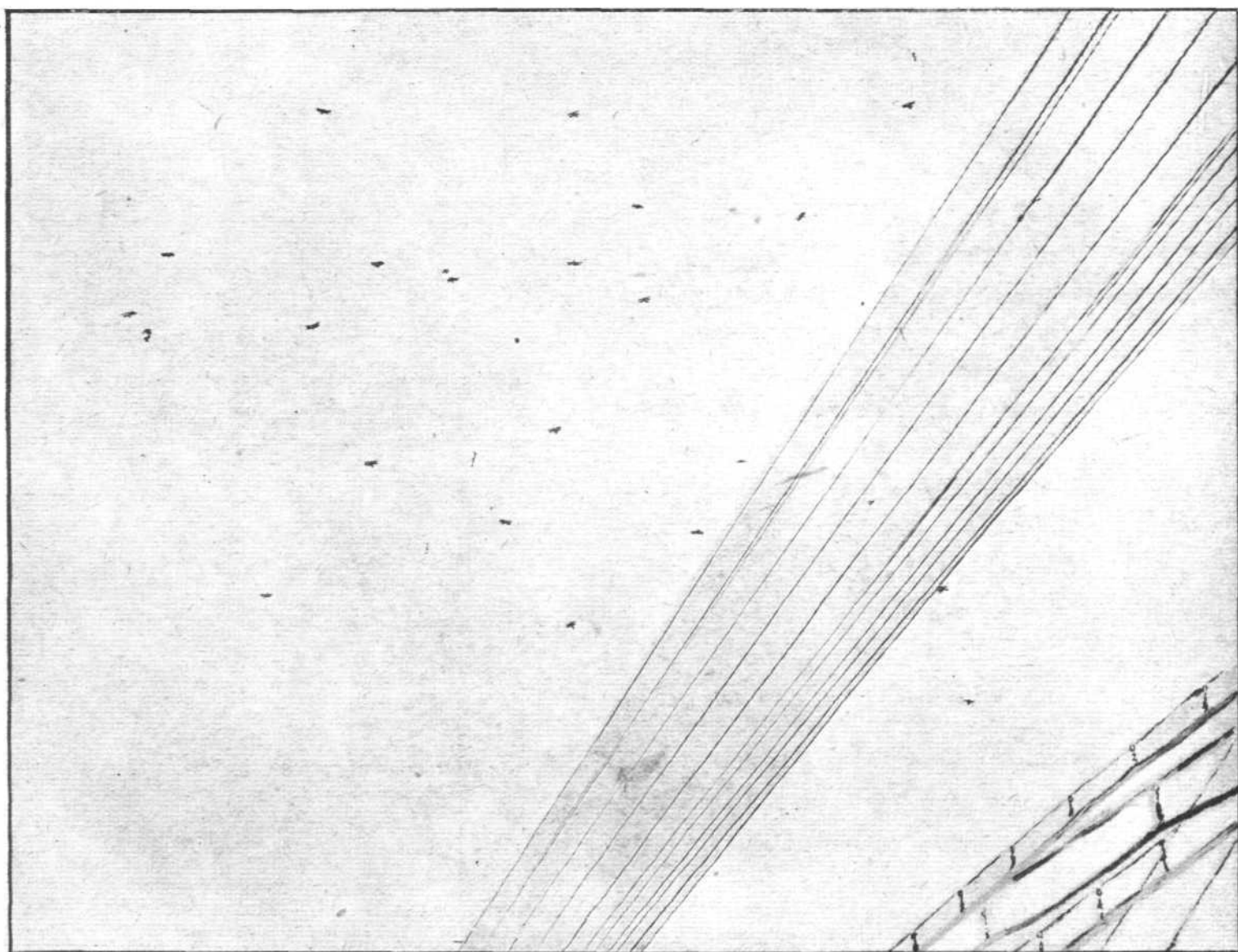
"Statements have been made that the enemy machines on Saturday flew at a low altitude, and that on occasions they hovered or remained almost stationary, whereas they were certainly never under 12,500 ft. and were travelling at from 70 to 80 miles per hour. It is very difficult to judge the actual position of the aircraft in plan—that is, over which they are vertical. Observers are apt to describe aircraft as overhead when they are at a considerable angle from vertical. Aircraft at a high altitude observed at even a small angle from the vertical are actually at a considerable horizontal distance from the observer.

"The general trend of the observations in the Press has been to make out that the aircraft have been practically knocking chimney-pots off. This is not in accordance with

the facts. The mistakes made by observers are chiefly due to the large size of the machines. It has been stated, and is perfectly true, that the German machines were of the Gotha type. These machines are about three times the size of the single-seater machines. It is perfectly obvious that a machine of the Gotha type at an altitude of 15,000 ft. would appear to be quite as large as a single-seater flying at an altitude of 5,000 ft. As a matter of fact, none of the enemy machines were flying below 12,500 ft. We were able to judge this from instruments in our possession, and these corresponded very closely with the instruments in the possession of our pilots.

"The statement that London was bombed at leisure is absolutely untrue and misleading. It was observed officially that some of our men were fighting the Germans over London. The German machines travel very fast, and until they arrive at a certain place we do not know where they are going. The German bases are much more convenient for visiting England than ours are to Germany. Our anti-aircraft gunners do everything humanly possible to burst the shells in the right place. Unfortunately mechanical errors are impossible to avoid. It is not contended that nothing can be done in the way of improvement. Our gunners are improving all the time. It takes a considerable time to train gunners. Our gunners are not old gunners, but they shoot remarkably well. It was only hard luck the other day that they did not score a hit. Our own pilots have remarked with what precision the shells were bursting.

"As to the formation of the German machines the minimum width between each machine was about 100 yards, the purpose being to leave a safe space between them. They were undoubtedly perfectly sure that their formation was the best one to adopt to minimise the effect of anti-aircraft gun fire. Obviously the programme for the aircraft defences of



THE AIR RAID OVER LONDON ON JULY 7TH.—Remarkable photograph taken from a centre of London over which the Hun raiders passed.

London was not complete. No defence was complete. There was always room for improvement. Every single thing was ready to receive the Germans on Saturday. Our pilots had a fair chance of beating off the German airmen, and in the raid on Saturday it was thought highly probable that several of the raiding airmen were wounded. The enemy machines were built for both bombing and fighting, and carried bombers and machine gunners."

Aid for Sufferers.

MR. MARK. H. JUDGE, Chairman of the Committee on War Damage, writing from 7, Pall Mall, asks it to be made known where to obtain application forms for grants in aid, in cases where personal injury from air raids has resulted in death or permanent disablement. The following is a letter which Mr. Judge has received from the Treasury:—

"In reply to your letter of June 29th, I am desired by the Chancellor of the Exchequer to say that applications for compensation in respect of injury through air raids should be sent to the secretary, Government Committee on the Relief and Prevention of Distress, Local Government Board, S.W. A form of application is being drawn up."

A Tower Hill Appeal to the King.

At the crowded meeting which took place on Tower Hill, on July 9th, a resolution was passed demanding reprisals in order to keep German aeroplanes in their own territory. The following telegram was sent to the King:—

"King George, Buckingham Palace.—Thousands of Londoners appeal to your Majesty to instruct your Ministers at once to make rigorous and continual air attacks on German towns and cities as reprisals for the murder of civilians—men, women and children, even infants at their school desks—and if your Ministers do not take steps to protect us, we implore your Majesty to dissolve Parliament, and appoint Ministers who will do their duty. Failing any other solution, we suggest the revival by Royal Licence of Letters of Mark, granting the right to privateers of the air to carry havoc and destruction as reprisals into Germany. In such steps your Majesty will have your Army and Navy and people behind you. This telegram is paid for by pennies of the people. Long live King George, King of the People and the People's King."

The following reply was received:—

"Buckingham Palace.—Your telegram has been received, and forwarded to the Prime Minister.—STAMFORDHAM."

Captain Atherley Jones, in moving the resolution, said that in declining to take steps to stop the raiders or to give warning of raids the Government had been guilty of a terrible breach of trust. Saturday's raiders were flying very low. They did not come so much to kill people as to take photographs, so that they would be ready for the next raid with 100 machines. He was informed that the authorities had received a notice from the Germans stating that they would raid London with 100 machines, and calling upon them to remove the civilians

20 miles out of the city. They would carry prussic acid bombs. We were not going to keep a Government who would not take steps to prevent these raids, and if the Government did not take ordinary commonsense methods for the purpose they must be swept out of office. He did not want women and children killed, but the point was that by sending aeroplanes to raid German cities we should keep the Germans from coming here.

Another German Version.

A SEMI-OFFICIAL telegram from Berlin says: A squadron of big fighting aeroplanes, commanded by Lieut. Kleine, attacked London at 11 o'clock on Saturday, during a bright day. The attack was in the first place directed against storehouses and factories. Bombs were dropped on the docks and the northern bank of the Thames, between Charing Cross Station and east of the Tower Bridge. This attack lasted a quarter of an hour. Results were observed by smoke clouds and explosions. Charing Cross Station was hit several times. A second attack was directed against Margate Harbour. Here also results were obtained. British anti-aircraft guns harassed our aeroplanes during the whole raid, and were very violent at London. Enemy airmen attacked our squadron, but without result, and were dispersed. One of our aeroplanes was forced by a defect in the motor to descend into the sea. It could not be saved.

According to Reuter, it is also claimed that London Bridge was struck by a bomb.

Air Committee's Views.

THE Parliamentary Air Committee, at a meeting on July 9th, Mr. Joynson-Hicks presiding, passed the following resolution, proposed by Sir Charles Nicholson and seconded by Sir Fortescue Flannery:—In the opinion of the committee every effort should be made to provide an adequate number of machines, in order to:

1. Meet the needs of the Army on various fronts.
2. Defend the country against hostile aerial attacks; and
3. Carry out punitive bombing raids on places of military importance in Germany.

Lord Tenterden's Demands.

LORD TENTERDEN tabled the following questions on July 10th, in the House of Lords:—

1. Who is responsible for the want of facilities given for the construction of aeroplanes in this country, seeing that our aerial defences at home have been for some time totally inadequate?
2. That a Parliamentary Committee be at once formed to meet representatives of aeroplane factories with a view to taking immediate steps to increase the output of aeroplanes.
3. That a large standing fleet of aeroplanes be kept for home defence, and for use for reprisals on German towns, the latter to be undertaken in force and by thoroughly up-to-date machines.

RAID-IOGRAPHS.

NOWHERE was there any panic, only intense rage and disgust at the whole business.

ON page 700 are given scale drawings of the twin-engined Gotha biplane, which was so prominent in the Huns' bombing "formation" which visited London last Saturday.

LORD SYDENHAM: "The recent air raid affords further proof of the advisability—I may say necessity—of issuing a public warning whenever it is known that a hostile attack is expected. I cannot understand the objection to give warnings. After all, it is the public which must be considered, and my experience is that the public are anxious to be warned in order that they can exercise their own ideas of self-preservation and the protection of their families. This demand seems general, and is one that should be complied with. I quite believe that the enemy will maintain their attacks from the air, and that they will send over machines in much larger numbers than they have done up to now. The general moral is that we can determine the war with aeroplanes. That is a fact which must be realised. The submarine menace is nothing by comparison, and the one thing necessary is for us to have a large supply of fast-flying aeroplanes to meet the invaders. It is quite impossible to diminish the strength of our air forces on the various fronts, but at the same time we must have better protection and better organisation for our home defence. At every air station in the British Isles the same disciplinary conditions which exist behind the front in France should obtain. Pilots should always be held ready to ascend, and a competent authority should always

be on the spot to give the necessary orders. Unfortunately, these circumstances do not prevail at present. We must strain every effort to increase the number of our fast fighting machines at home. Three squadrons would be sufficient to meet any ordinary invasion from the air providing they were all available at the same time, but up to the present we have not got that number available."

MR. HALL CAINE: "As a display of military prowess I thought it little short of contemptible. Already I see it described as an impressive and terrible spectacle. The squadron of aircraft are said to have come up in close formation and brilliant battle array. The manoeuvring, under the clear guidance of a leader, is said to have been masterly in its plan and its execution. Nothing of the kind. It would be difficult to imagine anything less suggestive to the eye of the spectator of the majesty, the unison, the terror and the splendour of war.

"Flying slowly, astonishingly slowly, the greater body of the formless mass came over the Metropolis and hung at poise there. For 15 to 20 minutes they did not seem to move. Against the grey banks of cloud they looked precisely and exactly like a collection of choiera germs on a glass disc. . . . If my feeling about the German air raid in its military aspect was a feeling of contempt, my sense of its human cowardice was a sense of almost ungovernable rage. It was an example of the most brutal bullying.

"I had intended to make some attempt to draw the political and moral lessons of this attack on London and on the London poor, by a gang of cowards and dastards, but my

heart is too hot for that to-day. Perhaps I have no such technical knowledge as would justify me in criticising the apparent unreadiness or inadequacy of our air defences. And certainly I have no patience with which to reply to the arguments (unworthy of the intellect of a Lilliputian) of the people who have lately told the House of Lords that the Germans have a right to bomb London."

THE very small amount of material damage caused is amazing. Only four actual fires were caused by the bombs, and one only of these necessitated a district call.

WHILST at a police court the cellars were opened and a large number of the general public, as well as the officials, availed themselves of that place of refuge, the magistrate, with the chief clerk, mounted to the roof of the court, from which they watched the raiders pass over.

At a street where a bomb fell in the raid on June 13th, another fell on Saturday, doing damage to two dwellings, but this time there was not a single person in them. A young married woman was killed close by from shrapnel.

In one street a bomb fell on a site on which buildings are being demolished, so that its descent helped rather than hindered the workmen, who all got away safely.

At Brompton Parish Church, the wedding service of Mr. A. O. McMurtrey, of Montreal, and Mis Isabella D. Strathy, of the same city, was punctuated by the reports of gunfire and fallen bombs. Both bride and bridegroom kept calm, and although it was suggested postponing the ceremony, neither were taking chances, and insisted on its going on.

THAT many, if not all, of the bombs are poisonous in their constituent parts there is little doubt. Dr. James Sequeira, physician in charge of the skin department of the London Hospital, in this connection warns the public and souvenir hunters that at the London Hospital he saw 14 cases of severe dermatitis, due to contact with powder from bombs dropped in the raid of June 13th. The majority of the patients were workpeople handling material which had been impregnated with dust from the explosive. In two cases the feet were affected through irritant matter in the streets. In one case simply handling powder picked up was the cause. The characters of the eruption were exactly similar in all cases. On the hands, the palms and fingers were stained a deep orange colour, and the inflamed area was covered with closely-set vesicles, in some instances confluent. The condition reminded one of a severe pompholyx. The hands were very swollen, and movement was impaired. The patients complained of intense burning and irritation. A point of special interest is that the vesicular dermatitis began in nearly every instance on the ninth day after the first contact with the powder.

AMONG the victims of Saturday's raid were two German master bakers and one foreman baker.

FROM the *Daily Chronicle* "Office Window":—"Oh for five minutes of Capt. Ball to smash this insolent formation," one thought, as he watched the air raiders lower themselves out of the clouds. To the present writer, who stood in a commanding position, they were no dragon flies or fluttering birds. They were huge, sharply-defined, mobile magazines of death. They came to the Metropolis, down and down, searching with contemptuous deliberation. After the first bomb a piecemeal avalanche followed, with unhesitated regularity, like the rhythmic beats of an incredible metronome. The demons who drove and dealt death cared as little for us as the earlier Zeppelinists cared.

"Their turning movement was masterly, defiantly precise ;



To Protect the Children.

THE London Education Committee are distributing the following among all children:—

"During danger from an air raid all children will remain inside the school buildings; all gates will be shut, and no one will be admitted. Crowding round the school premises only increases the danger.

"No place is absolutely safe, but experience shows that children are safer in school buildings than if sent out into the streets.

"The L.C.C. is doing all it can to secure the safety of the children, and it is hoped that parents will help by leaving their children entirely under the control of the teachers until all danger is over."

because we had not a Ball to break it. A black beast which led suddenly drew away from the stately procession, banked and turned south. All the rest followed in his wake, like ships at a naval review. Nobody disturbed them, though there was fighting toward, and vast guns roared repetitive ker-r-umphs! The machines turned perfectly, the innermost seeming to mark time as the outer ones accelerated. The manoeuvre was a well-rehearsed triumph for the enemy, but it seemed to us who watched deeply humiliating that such a thing should be achieved unhindered over daylight London."

WHEN the raid became imminent there were about 300 out-patients in attendance at a hospital, and they were sent by a doctor to the basement for safety. When the raid was over an old lady approached the doctor and handed him a collection of pennies amounting to over 16s. which had been made by these out-patients out of gratitude to the doctor for the shelter given them.

A FEW minutes after the air squadrons had retreated London went placidly on with its routine. Here is a small but quite typical instance. In the midst of the noise of explosions and the loud drone of the flying craft, a member of a certain club, having ordered a cup of coffee, took it in his hand and went out upon the balcony. The club waitress followed him to remind him that he had not paid for his coffee; took the money and returned with the change.

WITHIN three minutes of the detonation of the last bomb dropped on Saturday a sugar queue of women had been formed outside a West London stores, so large that a policeman had to regulate it.

A MOTE in his eye. "One observer," says a London paper, "thinks the machines were not more than 2,000 ft. up." As Chaucer has it: "He moot as well say one word as another."

OVERHEARD immediately after the last air raid on London: Old Gentleman, inclined towards a superfluity of avoirdupois: "Ah, our shaps fought dem very vell, dey fought dem very vell indeed."

NOWHERE was the raid watched with keener interest than at the Royal Aero Club. Not until the raiders appeared to be directly overhead and the sound of the bombs grew uncomfortably near did those members who happened to be on the premises retire to the billiard room in the basement.

"I think I'll go below for a few minutes," said one member, "as I want to see the next raid too."

A well-known designer of aircraft, who is of somewhat massive build, suggested taking refuge under the billiard table, but on someone pointing out that if he got underneath there would be no room for anyone else, the idea was abandoned.

The domestic staff of the Club assembled in the basement when matters got a bit "warm," but one servant, with complete indifference such as only a Briton could display, calmly went on cleaning windows all the time. Another had the presence of mind to feel faint, and thus obtain brandy during prohibited hours.

When the raid was over a member who tried to make a telephone call got put on to another line in time to hear an excited male voice exclaim: "Yes, they came right over my place only 500 ft. up!"

Everyone counted the enemy machines, and everyone got a different result. Some must have included our own aeroplanes, while it is suspected others added in the date and the number they first thought of.

Much professional admiration was expressed at the manner in which the Huns kept their fighting formation, and at the daring they showed by what one gentleman described as their "lowth."

R.N.A.S. Stars.

THE Secretary of the Admiralty announces that the star worn on the sleeve by graded officers of certain ranks in the R.N.A.S. is to be of the same size and design as the epaulette star worn by officers below the rank of Rear-Admiral, but in gold instead of in silver. On the shoulder-strap the star will be of a similar pattern, but of one-half the diameter.

The two stars worn by Squadron Commanders of less than eight years' seniority as Flight Lieutenant, Flight Commander and Squadron Commander will be worn in a vertical line on the sleeve and in a horizontal line on the shoulder-strap.



THE idea of an aerial post to bring in more funds to the British Red Cross is admirable. In Egypt this has actually materialised, the following being an extract from a summary of work in that country which has been received at the headquarters of the Joint War Committee at 83, Pall Mall: "An aeroplane leaves a certain point in the Canal zone daily, and carried such Red Cross comforts as fans, fly whisks, chocolate, gramophones, &c., to outlying medical units in the desert."

If the letters and packages only carry official recognition in the form of specially ear-marked Government stamps, there should result automatically a further valuable source of income from the demands of the philatelist. It should be a very profitable opening for the fund, without costing the Government a penny.

SUCCESSFUL example will ever inspire successful imitation. In this respect a very feeling and eloquent tribute was paid by Brig.-Gen. Charlton last week upon the occasion of his opening an Eccentric Club hostel for disabled soldiers and sailors in Hackney, in memory of the late Capt. A. Ball, V.C. General Charlton said that, although not the first to make a name in the R.F.C., Capt. Ball was about the first to surpass in fighting in the air, and the fact that numerous exponents of his art were flying over the German lines was materially due to the example he set and the success he achieved. Neither the element of personal danger nor the ambition for notoriety entered into his calculations. In this way his work still lived, and he knew of no more enduring monument to his gallantry nor higher praise due to a soldier.

IN connection with this same good cause a gathering (including the Mayor and Corporation of Nottingham) later took place at the Eccentric Club House, when General Brancker, R.F.C., once again expressed some very sound views upon aviation. The fact that the Germans had bombed the East End, he thought, had done more good for aviation than anything during the last five years, and they were already feeling its effect. He believed the future of this country, and possibly the end of the war, depended on aviation. We had fought bravely, bitterly and hard, and stopped the Germans, but he believed that decisive results had to come through the air.

By the state of political affairs in the land of the Huns, it looks as if the enemy public were at last also beginning to realise what was coming.

WHEN the day does arrive, the resulting peace should be one by the people for the people. Or, as Vorwaerts, one of the few German papers which has continued to publish flashes of truth, puts it: "The peace problem must not be settled, however, on the basis of military policy or power. It must be based upon the principles of international law." Just, so, but there must, nevertheless, be International "Police" to see there are no more opportunities of contemptuously tearing up "scraps of paper" as in 1914.

REGIMENTAL Trumpet and Bugle Calls for the R.F.C., by an Army Order for June, have been approved, and by the time this is in print copies may have been issued to all concerned.

CAUSE and effect. The modern way.

Pekin, Saturday, 11.50 a.m.

"AN aeroplane dropped bombs on the Palace to-day,"

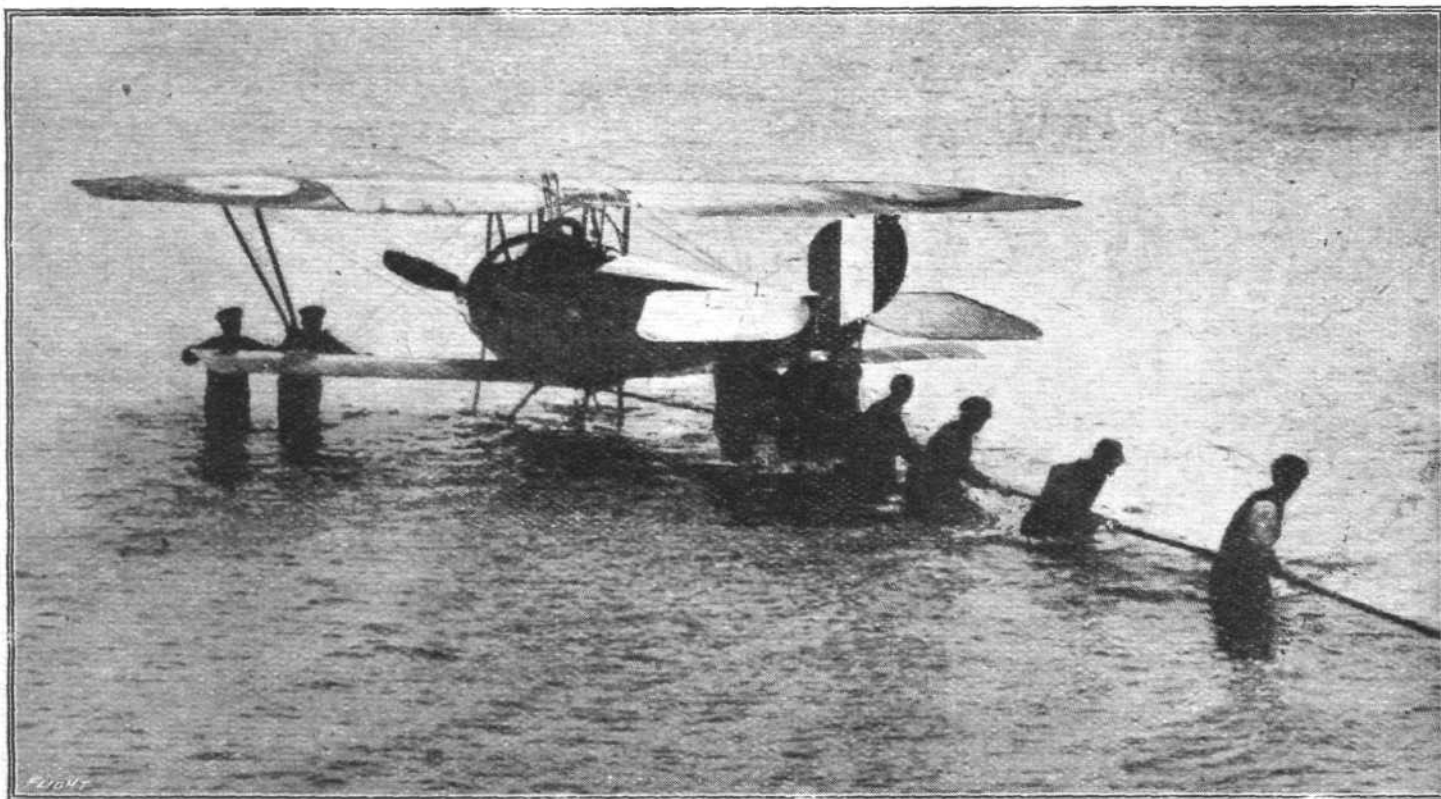
Pekin, Saturday, 7.40 p.m.

"General Chang-H'sun, who is much depressed by the bombing of the Palace and the failure of his coup, has tendered his resignation to the Emperor."

"The Emperor of China has abdicated."—Reuter.

How anybody could possibly court butting voluntarily into trouble existent in Chinese affairs is beyond comprehension. As reported, the mix-up in Ireland is as smooth as a mill-pond by comparison. This is how the situation is described from Shanghai:—

"Four parties have arisen: Firstly the Restorationists; secondly, the Bureaucratic Republicans, headed by the ex-Premier Tuan-Chi-Jui, who announces that he is marching toward Peking at the head of the Eighth Chihli Division, from Machang, 40 miles to the south of Tientsin; thirdly, Feng-kuo-Chang, who is alleged to be intriguing for the Presidency with the Provisional Government at Nan-king; and, fourthly, the Shanghai Republicans, who are despatching the cruiser 'Hai-chi' to Ching-wan-tao, hoping to bring Li-Yuan-Hung to Shanghai."



WITH THE BRITISH FORCES IN THE EASTERN MEDITERRANEAN.—Hauling in an Allied Scout.



An American
"one-and-a-half-
strutter" scout.
The latest
Thomas-Morse
tractor biplane.

FROM the Women's Land Service Corps, of 50, Upper Baker Street, who are acting for the Board of Agriculture, there has been issued an appeal for 200 women—under 40 years of age—who are wanted at once in Somerset to help our air services, by pulling flax to be used in the manufacturing of aeroplane wings. The work, which began on July 12th, will last for six weeks. Payment at the rate of 30s. an acre is offered, a rate at which the minimum earnings will well cover the living expenses. Good accommodation is offered, and there is a canteen, but the workers must provide certain small items of equipment.

There should not be much difficulty in filling the requirements.

COURTESY between opponents in the Flying Services of both the Allies and the enemy has been from the commencement of hostilities an outstanding feature. One of the latest examples comes from Lieut. A. M. Sutherland, a flying officer, and son of the Sheriff of Newcastle, who writes from Karlsruhe, stating that after his fight the German officer whom he engaged sent a message thanking him "for one of the best fights I ever had in the air."

WONDER if the raiders on Saturday were looking around for the new Air Board Offices, requisitioned last week at Clement's Inn, Strand?

EVEN the disturbed colony of lawyers are nonplussed over this latest move, especially as they have been notified that under the terms of the requisition they are still liable for their rents and must recover from the Government! The irony of the thing becomes still more pointed when the requisitioners are blandly informed that they should enter into "temporary arrangements for accommodation extending for a period terminating three months after the declaration of peace." "Where," asks one solicitor, "am I to find the landlord—the 'juggins'—who will consent to such a tenancy?"

THE adjacent Bankruptcy buildings have been suggested as more suitable for the Air Board Offices, but possibly the thought, that when that peace does come, it might be asserted that the Government were already in the Bankruptcy Court, might be a little too suggestive.

LADY COWDRAY last week opened a very up-to-date canteen at the Royal Aircraft Factory at Farnborough.

SIR WILLIAM WEIR, who should appreciate, if anyone does, what is best for the British Empire in regard to the command of the air, when thanking Lady Cowdray for carrying out the

formal ceremony of declaring the new canteen open, associated Lord Cowdray's name with the vote of thanks, who, he reminded his listeners, had recently assumed a very heavy responsibility, first as a member of the Government, and, secondly, as President of the Air Board, in which he was associated with the two Services—or, rather, Sir William added significantly, what they would like to see, one great air Service which would ultimately finish the war.

THAT "One Air Service, One Uniform, One Badge," will come yet, and the sooner the better.

"On some of the buildings in Whitehall persons were seen on the roofs." Thus a London paper in regard to Saturday's raid. Must have been some of the charladies. "Cuthbert" would sing with dear old Rutland Barrington in the Mikado:—

Let me make it clear to you,
This is what I'd never do,
I'd never do, I'd never do,
I'd never, ne—ve—r do."

The song is "Were I not to Ko-ko Plighted," not "Were I not to Blightly Plighted."

Who is it gets up the "fake" snapshot photographs for the consumption of the gullible public? We do not refer to the admirable picture secured by a Sunday Pictorial photographer, and which appears in the pages of "FLIGHT" this week.

FIRE fighting from the air is the latest stunt idea from the other side of the Pond. Plans for an aerial fire fighting unit, so the story runs, are announced from San Diego, California. Two 100 h.p. "flying boats" are to be used in combating "water-front" fires.

ALL the same, why not aerial fire engines? According to our American contemporary, *Aerial Age*, when fire broke out at the Cedarshore Chateau the blaze was observed by the aviators of the Yale aviation camp at Smith's Point, some ten miles away. The chief instructor and a pupil at once got into a Curtiss biplane and flew over to the fire in about six minutes, landing on the beach near by. After assisting to extinguish the flames they returned to the camp.

THIS little stunt—at first sight quite a trivial affair—suggests great possibilities to us. Where there are isolated districts—miles away from anywhere—outbreaks of fire could promptly be dealt with by means of one or more aeroplanes, equipped with pumping gear, which would fly over from some suitably located station.

The Lafayette Squadron Gets its Flag.

FROM the Front the Paris *Journal* announces that the squadron of American aviators who enlisted voluntarily in the French Army, and who have been fighting in our ranks since 1915, under the title of the Lafayette squadron, on July 7th received its war flag officially. The flag was sent by the Commander-in-Chief of the Navigation Staff in the name of Mr. Daniel Vincent, Under-Secretary of State for Aviation, who had himself received it through the medium of the French Ambassador at Washington from a group of 40 young American girls.

Aerial Bombs Settle the China Monarchy.

FROM Peking it is announced that the Manchu Emperor has already abdicated. It appears that at 11 o'clock on July 7th an aeroplane visited Peking, flying at a great height. It dropped three bombs on the Forbidden City, killing a man and damaging some buildings near General Chang Hsun's headquarters, which were probably the objective.

General Chang Hsun, who is much depressed by the bombing of the palace and the failure of his coup, has tendered his resignation to the Emperor. The latter is issuing an Edict announcing his abdication.

THE EGYPTIAN EXPEDITIONARY FORCE.

IN a *London Gazette Supplement* for July 6th a despatch from General Sir Archibald Murray describes the operations undertaken by the Egyptian Expeditionary Force from the beginning of October, 1916, to the end of February last. The principal achievements of this period were the capture of El Arish, the complete defeat of the Turkish forces at Magdhaba and Magruntein, and the final recovery of the province of Sinai from the grip of the enemy. No less notable than the military successes east of the Canal was the preparatory work which rendered them possible. Across the trackless Sinai desert railways and roads had to be constructed, water pipes laid, and successive lines of fortifications prepared.

In describing this work, which was pushed on unremittingly for months, General Murray reports in connection with the capture of El Arish that the advance against the retreating enemy was carried out as a consequence of the report of the R.F.C. that the El Arish garrison was at Magdhaba.

On December 27th the R.F.C. reported that an entrenched position was being prepared by the enemy at Magruntein, near Rafa, and General Murray determined, if possible, to repeat the success at Magdhaba by surrounding and capturing the position. After 10 hours' heavy fighting the whole position was captured.

The result of these successful operations was that the

province of Sinai, which for two years had been partially occupied by the Turks, was free of all formed bodies of Turkish troops. The destruction of his rearguard at Magdhaba compelled the enemy to withdraw from Maghara, Hassana and Nekhl, all of which were clear by December 31st, and the victory at Magruntein had driven him over the frontier at Rafa, which he did not attempt to re-occupy.

During the actions, proceeds General Murray, the work of the R.F.C. in co-operation with the mounted troops was admirable.

In the list of recommendations which is attached to General Sir Archibald Murray's despatch, are the following: Lt.-Col. (Temp. Brig.-Gen.) W. G. H. SALMOND, Bt., R.A. and R.F.C. (Staff).

Royal Flying Corps.

Lt. (Temp. Major) E. J. BANNATYNE, Capt. (Temp. Major in Army) H. BURCHALL, R.F.C., S.R.; Capt. R. H. FREEMAN, Worc. R.; Temp. Capt. W. J. Y. GUILFOYLE; Temp. Lt. S. G. KINGSLEY, Gen. List; Temp. Capt. S. K. MUIR; Flt.-Sergt. W. A. BRADWELL.

Australian Flying Corps.

Capt. A. M. JONES, Capt. W. SHELDON, Lt. L. J. WACKETT, 156 Flt.-Sergt. E. A. GIBBS (67th Sqdn.), Warrant Officer A. W. MURPHY (67th Sqdn.).

HONOURS.

Honours for the R.F.C.

In a Supplement to the *London Gazette*, issued on July 9th, it was announced:—

The King has been pleased to award the Military Medal for bravery in the field to the following Non-Commissioned Officers and men:—

77449 Sergt. B. ALDRED, R.F.C.
2911 2nd Air-Mech. F. G. ELLIS, R.F.C.
5303 Corpl. E. HARPER, R.F.C.
9236 1st Air-Mech. H. J. HAYES, R.F.C.
4251 1st Air-Mech. N. PARKINSON, R.F.C.
12270 1st Air-Mech. J. THOMPSON, R.F.C.
1197 Corpl. R. E. TOLLERFIELD, R.F.C.

THE RAID ON ESSEN.

Reprisals at Essen.

THIRTY-ONE aeroplanes are reported by the Central News to have participated in the Allied air raid on Essen district on July 6th. Several bombs were dropped, with terrible effect, on gun factories at Thyssen. At Friemelsheim a number of buildings were wholly destroyed. It is already known that 20 persons were killed, but the number was really much greater, and large numbers were wounded. The Krupp factories at Essen were the chief aim. Here the bombardment was terrible, and the damage was very great. At Essen the squadron apparently divided into two, in order to execute attacks on other military establishments. One of the aeroplanes which participated in the raid had to land on Dutch territory, near Helden. It was of French nationality.

The German Version.

A Berlin official telegram on July 9th says:—"Enemy airmen on the night of July 7th undertook numerous attacks on the German homeland. The result of the attacks, which were undertaken with strong forces, was *nil*. No works of the armament industry nor any other military works were hit. As far as could be judged from the bombs dropped and the noise of the aeroplanes, the attacks were directed upon the factories at Mannheim and Ludwigshafen and in the Saar district. Near Mannheim and Ludwigshafen and in the Saar district all the bombs were dropped in a wide circle around their presumed objectives. One or two airmen extended their voyage to the Ruhr district. Near Essen, in spite of an assiduous search during the day, only two bomb-holes were found. Six other bombs smashed some window-panes in a village 40 kilometres (25 miles) distance from Essen. A number of enemy airmen apparently lost their way, because numerous bombs fell in districts where no objective was apparent, as, for instance, on the peaceful villages of Speicher, Ehrang, and Oberemmel, where a child fell a victim to the attack. At the town of Neunkirchen, which is militarily of complete unimportance, a man was killed and a woman was severely and a child slightly wounded. In the suburb of Diedenhofen a bomb killed a family of three. At Treves the roof of the Franciscan monastery was set on fire by a bomb. Beyond that, apart from broken window-panes, nowhere was material or personal damage. One of the airmen who attacked Treves was forced to the ground by our anti-aircraft guns. Near Saarburg, an aeroplane was smashed, one of the occupants, who was wounded, being made prisoner. For what reason the open and, from a military point of view, completely unimportant town of Treves was again bombed is incomprehensible."

An account from one of the French pilots:—

Sergeant Aviator Maxime Gallois, who is the hero of the Essen attack, has given his account of his expedition. His was one of the 84 machines which took the air for various objectives behind the enemy's front, and this assembly of fighters carried out its mission and returned to the starting point, with the exception of two machines only, within 36 hours. Sergeant Gallois, in describing his part of the expedition, said:—

"We started at 9.20 p.m. There were four of us bound for Essen, but the night was foggy, and I soon lost sight of Lieut. Ardisson and Adjutant Paillard, partly owing to the fog and partly because their oil supply gave out, they only getting as far as Coblenz and Treves. My course lay down the Moselle to Coblenz. I was fired at crossing the line by French batteries. Over Metz searchlights were playing, but I passed undetected. I continued steering by compass to Treves, where I heard my own comrades bombing the town. Then I picked up the Rhine with the moon shining on it, and flew up-stream past Bonn and Cologne to Düsseldorf. Looking down on the German towns was like looking down on a sea of electric light. I was several times fired at by anti-aircraft guns, especially at Cologne, where the shooting was uncommonly good. Over Westphalia the blaze of light below me grew constantly brighter. As I approached Essen there was a broad band of light on the horizon, which seemed to be several miles long, while southward of the town was another great belt of light from the iron and steel foundries.

"I arrived over Essen at a height of 6,500 ft. to avoid the air defences. I chose the spot where the blaze of light from the factories seemed brightest, and there threw my cargo of bombs, counting ten between each bomb and the next. It is impossible to say what effect the bombs had among the blazing factory chimneys below. I then started homewards, returning by the route by which I had gone. I was frequently fired at, but my machine worked perfectly, and I managed to reach home just as my petrol was running out."

At the start of the flight he had unluckily lost his motor goggles, so that by the time he reached home, following the same route as on the outward journey, and once again constantly fired at *en route*, he was almost blinded, and was not certain whether he had got back into France, when he suddenly caught sight of a signal which told him that he had reached the aerodrome from which he had made his start. In landing he had an accident with his machine, through not being able to see clearly, but he was himself unhurt, and yesterday looked none the worse for his adventures.

AVIATION IN PARLIAMENT.

Anti-Aircraft Gun Practice.

MR. BILLING in the House of Commons on July 4th asked the Under-Secretary of State for War whether anti-aircraft gun practice carried out with blank cartridge for the purpose of testing the recoil mechanism of the guns is the only practice whereby the efficiency of gun crews is attained; and whether in view of the increasing likelihood of the employment of these men under active service conditions, he will take steps to ensure that not only gun crews in London but those in the provinces are afforded opportunities for full instruction and practice?

MR. MACPHERSON: The answer to the first part of the question is in the negative; with regard to the latter part, all the measures suggested are in operation and have been so for a considerable time past. This applies to all gun detachments irrespective of whether they are stationed in London or elsewhere.

Anti-Aircraft Shells.

MR. BILLING asked the Under-Secretary of State for War whether a number of shells recently fired in this country from anti-aircraft guns failed to explode; and whether any inquiry has been held on the matter?

MR. MACPHERSON: It would not be in the public interest to give this information.

MR. BILLING: Will the hon. gentleman, in the public interest, see that it does not occur again?

The Late Captain Keevil.

MR. BILLING asked the Under-Secretary of State for War to state what type of machine the late Captain Keevil, R.F.C., was flying when he was recently killed in this country; whether he was flying under peace or war conditions; if any inquiry has been made into the circumstances; and, if so, what were the findings of that inquiry?

THE PARLIAMENTARY SECRETARY to the Air Board (Major Baird): Captain Keevil was killed when flying under war conditions. It would not be in the public interest to give the information asked for in the other parts of the question.

MR. BILLING: Was this man flying under war conditions with a machine which was not suited to war conditions?

MAJOR BAIRD: That is quite inaccurate, and it is not in the public interest that I should say anything further about the matter.

MR. HOGGE: Will the hon. Gentleman answer that part of the question which asks whether an inquiry has been held?

MAJOR BAIRD: I said I had nothing to add.

MR. HOGGE: Is the House of Commons not entitled to an answer to the simple question—I do not ask the result—whether an inquiry has been held?

MAJOR BAIRD: Of course, we cannot make an official inquiry into the case of every man killed at the front.

MR. BILLING: I should like to say—[Hon. Members: "Order!"] I will raise this matter on the first opportunity, and state the kind of machine and the conditions under which this occurred.

MR. SPEAKER: The hon. Member is entitled to give notice, but not to make observations.

Zeppelin Prisoners.

MR. R. McNEIL asked the Under-Secretary of State for War whether any and, if so, how many, members of the crew of a Zeppelin recently brought down in England were taken alive?

MR. MACPHERSON: Three prisoners were captured alive.

MR. McNEIL: Why was this not reported at the time? Was there any reason for secrecy about it?

MR. MACPHERSON: I cannot say off-hand why it was not reported. If the hon. Member will put down a question I will endeavour to answer it.

Enemy Air Raids.

SIR H. DALZIEL on July 5th asked the Prime Minister whether he has any information showing that the exact time and place chosen by the enemy for recent air raids over England followed upon information supplied by enemy agents in this country?

MR. BONAR LAW: The answer is in the negative.

SIR H. DALZIEL: Is it not the case that on the occasion of the recent attack upon London the conditions for attack were much more favourable than they would have been immediately preceding and immediately after. Would the right hon. gentleman also say whether it is not the case that on the day of the Harwich raid an important movement of troops was taking place immediately before the attack?

MR. BONAR LAW: All the answer I can give is that the Department concerned has no evidence such as my right hon. friend's question suggests.

MR. HOGGE: Has the right hon. gentleman seen the statement in a London paper to the effect that on the occasion of the recent raid on London all the machines which could have met the attack were removed, and that General French had complained to the War Office that that had taken place; and can the right hon. gentleman say whether that is a rumour or whether there is any truth in it?

MR. BONAR LAW: In regard to that, the subject has been discussed at a meeting with General French, at which I was present, and I am quite certain that nothing of that kind occurred.

SIR H. DALZIEL: Does my right hon. friend suggest that it is not the case that important squadrons were away on that particular day and were subsequently brought back?

MR. BONAR LAW: I cannot say as to that. The question was whether General French had complained?

SIR H. DALZIEL: What is the answer to my question?

MR. BONAR LAW: I do not know.

Air Raid Victims' Estate.

SIR G. TOUCHE asked the Chancellor of the Exchequer if he will consider the question of extending the benefits of the Death Duties (Killed in War) Act, 1914, and the provisions of the Finance Act, 1894, relating to the free estate of a sailor or soldier, to the estates of civilians killed in air raids?

MR. BONAR LAW: I have carefully considered this suggestion, but regret that I am unable to adopt it.

Aeronautical School Instructor.

MR. SUTTON asked the Under-Secretary of State for War whether he is aware that an associate member of the Aeronautical Institute, who is draughtsmanship instructor at the British School of Aeronautical Engineering, Oxford Road, Manchester, classified C 1, has been called up by the military authorities, and is now serving in the Army Service Corps at Ormskirk cleaning horses, &c., and for the past two weeks has been laid up through the kick of a horse; whether he is aware that the drawing and design work of this aeronautical school, which is doing most important work at present, has had to be suspended, stopping the work of about 30 aeronautical pupils, many of them in the Royal Flying Corps; and, as no one is available to take his place, whether he will consider the advisability of this man returning to his former work?

MR. MACPHERSON: My hon. friend has already been in communication with me about this case, and I have asked that it may be reconsidered.

Lighting Restrictions.

MR. HINDS asked the Home Secretary whether he will announce at an early date the intentions of the Government as to lighting restrictions during the

coming autumn and winter; and whether, in the event of the restrictions being renewed, it will be found practicable to fix settled monthly time for darkening throughout the country as in London, instead of daily alterations regulated by the hour of sunset?

SIR G. CAVE: An announcement with regard to the lighting restrictions during the autumn and winter will be made in due course if any modification of the existing orders is considered desirable. I will consider the suggestion in the latter part of the question.

Enemy Air Raids.

MR. BILLING asked the Prime Minister whether he will give an early day for the discussion of the questions of air-raid warnings and compensation for victims of enemy air raids over this country?

MR. BONAR LAW: The answer is in the negative.

MR. BILLING: Will the right hon. gentleman take an early opportunity of making a very definite statement with regard to the compensation; and also whether it is the fact that London is the only place where air-raid warnings are not permitted?

MR. BONAR LAW: I made a very definite statement as regards the compensation. The other matter is one which must be dealt with by the Home Office.

MR. BILLING asked the Prime Minister whether, pending the Government's decision as to warning London of the approach of enemy aircraft, he will at least consider the advisability of introducing some system of signalling whereby the public may be made acquainted with the fact that a raid has terminated and the danger is past?

MR. MACPHERSON: The question of giving notice that danger from an air raid had passed has already been considered, and the disadvantages outweigh any advantage that might accrue from its adoption.

Enemy Air Raids and Defences.

MR. PEMBERTON BILLING, on July 6th, asked the Prime Minister whether he has received any diplomatic representations by the French Government with reference to the initiation of a sustained air offensive over Germany; and, if so, whether he is prepared to make any statement on the subject?

MR. BONAR LAW: The Government propose to move the Adjournment this evening in order that there may be a Private Sitting to discuss the subject of air defences. This and other questions of which I have received private notice will, I think, best be answered by the Prime Minister, who hopes to deal with the matter.

MR. BILLING: Should I be in order in asking leave to move the Adjournment at the end of questions, so that we may have an opportunity of a public debate, and then, if we find it necessary to go into Secret Session, we can do so? The feeling in the country is very intense.

MR. SPEAKER: The hon. member will not advance matters in that way, because it will still be open to anybody to espy strangers.

MR. LOUGH: Does my right hon. friend intend to move the Adjournment immediately after questions?

MR. BONAR LAW: The Government propose to take that course about 8.30 this evening. It is obvious that it is not possible to give information in public which alone would enable the House of Commons to understand what is the situation.

MR. McKENNA: Will the discussion be opened with a statement by the Government?

MR. BONAR LAW: I have not discussed this question with the Prime Minister, but I take it for granted that he himself will make the first statement.

MR. CHURCHILL: Will the right hon. gentleman arrange to have a confidential record taken of what passes in the Secret session, and will he consider whether it may not be possible afterwards, by arrangement between the parties and the authorities concerned, to give an expurgated account of what has taken place in order that as much knowledge as possible may be given to the public without detriment to the public interest?

MR. BONAR LAW: It is obvious that there is a great deal of force in what my right hon. friend says, but there are two considerations that must govern the matter. One is public opinion outside and the other is opinion in the House of Commons. We consider that it is our duty first of all to satisfy the House of Commons as to what is being done, and this can best be done only by a Private Session. As to the public, I am not sure that the suggestion of my right hon. friend can be adopted, but I shall consider it and discuss the matter with the Prime Minister.

MR. BILLING: Are we to understand that the public is not represented by this House?

MR. BONAR LAW: It must be pretty obvious to the House that the public cannot be influenced by statements which they have not had an opportunity of hearing.

SIR HENRY DALZIEL: May I ask the right hon. gentleman whether, when the Government came to the decision to hold a Secret Session, they took into consideration the fact that the public are entitled to know who are guilty of culpable negligence in regard to this matter? I give notice now that I shall oppose the Secret Session to-night.

MR. BONAR LAW: Might I suggest to my right hon. friend that there are two quite separate considerations. We think that our first duty is to satisfy the House of Commons if we can. If, after the Debate to-night, my right hon. friend still thinks that there should be a public discussion we shall throw no obstacles in the way.

COLONEL CLAUDE LOWTHER: Does the right hon. gentleman suggest that a Secret Session will satisfy the relatives of the people who have lost their lives by these German air raids?

MR. BONAR LAW: I am not sure that if people only knew what it will be possible to tell the House they would not agree that a case exists for the course we suggest, but at any rate surely it is wise that the House of Commons should hear what we have to say first.

MR. MACCALLUM SCOTT: I want to ask a question about the suspension of the Rule.

MR. SPEAKER: The Rule cannot be suspended without notice.

MR. BILLING: Again may I ask if I shall be in order in asking leave to move the Adjournment of the House?

MR. SPEAKER: The hon. member will be in order, but he will not gain anything, the Government themselves having undertaken to move the Adjournment.

MR. BILLING asked the Under-Secretary of State for War at what time last Wednesday the first intimation was received of the approach of enemy aircraft to our coasts; at what time were the first orders given for our machines to take the air for purposes of defence; and at what time the anti-aircraft batteries on the coast were given the Field-Marshal's air-action order?

MR. BILLING asked the Under-Secretary of State for War whether any maps or charts used by enemy airmen in air raids over this country have come into the possession of the War Office or any other authority; whether these charts not only gave the positions of our latest anti-aircraft gun emplacements but also indicated the position of prospective anti-aircraft gun emplacements; and whether they have any knowledge of how this secret information as to the latest decisions of the War Council came into the possession of the enemy?

MR. MACPHERSON: It is obviously undesirable from every point of view to give the information for which the hon. member asks.

MR. BILLING: May we take it that for the Debate which it is proposed shall

take place the hon. gentleman will put himself in possession of the actual facts, so that we may have an answer to this question in Secret Session if not in Open Session?

Mr. Macpherson: My hon. friend should put that question to the Leader of the House.

Mr. Billing: May I ask the Leader of the House if we can have an answer in Secret Session to such questions as to whether any maps or charts used by enemy airmen have come into the possession of the War Office?

Mr. Bonar Law: I can give no answer to a question which I have had no opportunity of examining.

Mr. Billing: Will the representatives of the War Office and of the Admiralty be here, and will all the information that members may wish to have be available if we are in Secret Session?

Mr. Bonar Law: The representatives of the two Services will be here, but I cannot promise that all the information will be given.

Mr. Billing: What is the use of going into Secret Session if we are not to get the information we want?

Mr. Speaker: The hon. member is travelling a long way from the question on the Paper.

Air Service Casualties (Inquests).

Mr. BILLING asked the Under-Secretary of State for War whether courts of inquiry are still held on the deaths of airmen which occur while flying in this country?

Mr. Macpherson: Yes, Sir; in all cases of accident, but not necessarily when the casualty occurs on active service.

Mr. Billing: Was the attention of the hon. gentleman called to the reply given to this question by the Parliamentary Secretary to the Air Board in which he directly contradicted that and said that it was impossible?

American Construction.

Mr. BILLING asked the Prime Minister whether his attention has been called to the decision of the American Government providing for the immediate construction of 23,625 aeroplanes; whether, as a point of policy, we have yet complied with the representations received from America for the loan of one or more of our latest types of aeroplanes for the purpose of bringing the American constructors down to date as to our latest developments; and, if so, how many machines have already been dispatched to America?

Major Baird: I have been asked to answer this question. I have seen the report referred to in the first part of the question. As regards the second and third parts, steps have been taken, and are being taken, to give the United States Government the latest information, in whatever form is most suitable, in regard to aeronautical construction; but, as the hon. member has previously been informed, it is not considered desirable to make a detailed statement.

Upon the Civil Service Estimates coming on Sir H. Dalziel took the opportunity to ask the Home Secretary whether he still held the opinion which he did with respect to warnings to the inhabitants of London in regard to air raids?

Continuing he said: I gave notice to the Home Office that I intended to ask another question closely associated with this matter. I suggest that my right hon. friend should issue orders at once to the police of London to report as to the number of unexploded shells at present in police stations. I suggest that he should issue that order in order to collect the number of unexploded shells, mostly British, I fear, which were picked up throughout London on Saturday and yesterday, and that he should tell the House, to-day if he can, how many unexploded shells have been collected by the police authorities of London. I am not going into the question of percentages. I have heard it stated that over 50 per cent. did not explode. That is not a matter for him. He is only concerned with the work of his officers and of the police. But it would be very useful if he could tell us, because that is the only means by which we can get reliable information, what foundation there is for the rumour of this enormous number of unexploded shells. It is a fact that a large number did not explode, and are unexploded at present.

Mr. Houston: Do you mean British shells?

Sir H. Dalziel: Yes. Here is one that came through my office on Saturday morning. It came through the roof and through two floors into the corner of my office, and it is not exploded at the present moment. It becomes rather a domestic matter under the circumstances. I think there is no doubt it is a British shell. I invite gentlemen who are interested, seeing the number of floors it has penetrated through, to come and tell us. This is only one of a large number of British shells which were collected on Saturday and yesterday. I ask my right hon. friend if he will ask the police to give a return of the number which have been collected in the police offices throughout London, and if he will give notice to the Secretary of State for War? I shall invite him at the proper time to make a full statement on the subject.

THEREAFTER followed a long discussion upon the question of warnings of air raids and the most effective methods of given such warning to London. Mr. Lough said: that we must not be disturbed as we were on the day after the last month, when we had three or four warnings which did not mature at all. We must take care to avoid warnings of raids which may not mature. Yet I do think that the experience gained on Saturday shows that warnings of a very useful character may be given if it is quite clear that aeroplanes are going to reach London. There is a splendid organisation under the control of my right hon. friend throughout London—the Metropolitan Police. They have most accurate information, and I think that perhaps a 15 or 20 minutes' warning by them might be extremely useful. From what I have heard, and from what I have read in this morning's paper, there is a consensus of opinion to the effect that there was no panic in the City, and also that a great deal of life was saved by people taking shelter instead of remaining in the streets. I do think, as the people behaved so splendidly, that it may go far to defeat the machinations of the enemy if we had, with the aid of the excellent organisation at the disposal of the Home Secretary, a system of short warnings given by the Metropolitan Police.

In reply to various speakers Sir G. Cave said: Having regard to the experience of Saturday, I think it is quite safe to say that the matter must be reconsidered every time these events occur, and, having regard to the experience of Saturday, we must have recourse to the facts. I think there is one consideration in the minds of the Committee, whether it would not be possible, not to issue a public warning of the distant event on the coast, but to find some system under which we might proceed and give out a shorter notice of the immediate imminence of a raid. If we know that the raid is actually approaching us, and if the raid is almost certainly coming for London, then I think there will be less objection to conveying that information to the public. There are, of course serious difficulties in the way, difficulties that have to be got over, and I do not know whether it would be possible to get over the obstacles which now stand in the way of this course, but certainly the Government will bear in mind the considerations which have been brought forward in this House, and take steps to secure the public safety. It would not be right for me not to add this, that the public authorities in London have been good enough to consult us on this question, and they loyally accepted the Government's decision, not in consequence of its being according to their own view in every case, on the question of warnings to be given. Those who disagreed, as well as those who agreed, have loyally accepted our decision, and if we think it right to institute a system of warnings for this purpose, I am sure they will be the first to give us their assistance.

The Secret Session.

At 8.30, as previously intimated, the House went into Secret Session, and the following is the official report of the proceedings:—

The Prime Minister said that it was better first of all to give briefly a summary of what actually happened. Twenty-two German machines of the Gotha bombing type, carrying about 800 lb. of explosives apiece, came over London. Of these, three were destroyed, one by the machines actually protecting London. Besides this, out of the protecting squadrons which the Germans had organised in order to assist the return of the raiding squadron, six machines were destroyed and one injured. The attack, in fact, had not been made with impunity. He wished to point out that the first fact which the House should get into its mind was that complete protection in the air could never be secured.

At the front our machines were every day crossing over the German lines, and, in spite of the most terrible anti-aircraft fire and very powerful German air squadrons, they were yet able regularly to bomb stations and headquarters behind the German lines. If that could be done in a region where the German aeroplanes and anti-aircraft strength were most closely concentrated and could be done daily, then the House would realise that no measures that we could take would give complete immunity. The nearest approach to immunity lay in making their visits so costly that they would not become worth the Germans' while. He wished to point out also that during the last four or five months our naval bombing aeroplanes had dropped over 70 tons of explosives on the German aerodromes in Northern Belgium and had dropped six tons on those very aerodromes on the night before the raid, whereas the total amount dropped by the Germans here was only some two tons.

The first consideration before the Government was to see that the Army in France was sufficiently supplied with aeroplanes. A sufficiency of aeroplanes meant everything in that Army. They were the eyes of the Army, which could not advance without them. By their means the Army discovered the enemy's trenches, guns and machine-gun emplacements. To photograph these required air supremacy, and without that air supremacy it was sheer murder to allow troops to advance. The 28 fatal casualties which had been suffered by the civilian population in the last raid were very regrettable, but unless our troops at the front were supplied with aeroplanes in sufficient number to secure a proper knowledge of the German trenches and positions and to guide the artillery barrage their losses might easily be not 28 but 28,000.

The slightest deficiency in the aeroplane work, a single machine-gun emplacement overlooked, might in a few minutes mean the loss of thousands of gallant lives. The first duty of the country was to protect these men. The Germans realised the importance of this question quite as much as we do.

The second means by which they were attempting to diminish our superiority was by trying to force us to withdraw our machines from France in order to protect our own towns. If the Germans knew that by bombing English towns they could force us to withdraw fighting squadrons from France there could be nothing which would encourage them more. Nothing could be more disastrous to the conduct of military operations than anything which encouraged the Germans to believe that by these raids they could excite such a clamour in this country that the Government could not resist the demand for the withdrawal of aeroplanes from the front. If the aeroplanes could be provided both for the front and for our defence against raids that would, of course, be done. If not, the Army must come first, and it was vitally important that the Germans should know it. He feared that some of the articles which had appeared in the Press might prevent the Germans knowing it. He had seen something of the people in the district which had suffered from the raid a few hours afterwards. He had never seen people face disaster with greater cheerfulness and constancy. He saw no signs of panic anywhere. That was the impression left not only on his mind, but on all who were with him. He was certain that if the people of this country realised that for the moment all our strength had to be put into establishing supremacy in the air in order to win victory at the front they would be prepared to take risks which, after all, were not comparable to the risks run by our soldiers.

The Germans were just as alive to the importance of supremacy in the air as we were. They had put forth prodigious efforts in the last 12 months. In the last six months we had enormously increased our capacity for turning out machines. We had extended existing works and built new ones, we had quickened production by improved methods of organization and had enormously improved the type of machines. The Government's information was that the German capacity of production was not adequate to compete with the provision which they had made. Hitherto, however, the increase had only been gradual, as the measures taken at an earlier date by the Air Board and the Ministry of Munitions had not yet had time to reach their full fruition, but our production was now going up by leaps and bounds. We should, indeed, have been far better off at this moment but for the strike in April last, which lost us between 150 and 200 machines.

The Government now hoped soon to reach a state of things where it was possible not only to meet what must always be the first charge upon it, namely, the requirements of the Army in France, but also to provide sufficient aeroplanes to make it impossible for the Germans to come over here without losses which would persuade them that it was not worth while to do so. It was a very easy matter to go to poor people who had suffered and suggest that a raid like this was due to the negligence and carelessness of the Government, but he believed if those people were told what the situation was, they were capable of rising to a great appeal. If they were told that it was necessary to run some risks for a short time for the sake of the gallant fellows in France, they would do so cheerfully. It was only for a very short time, and he was confident that we could then not only secure supremacy in France, but also equip Lord French in such a fashion that if the Germans came over again they would deem it the part of wisdom not to repeat the attempt.

The Prime Minister concluded by moving the adjournment of the House.

The Debate.

Mr. Joynson-Hicks suggested that if it was good business for the Germans to spare machines to bomb us and strike at the centre of our fighting forces it might be good business for us to spare machines in order to do the same. He suggested that more labour might be spared for the making of aircraft from other branches of munition work. He criticised the actual measures taken to cope with the raid, and asked for an enquiry.

Sir H. Dalziel also criticised the actual steps taken on Saturday, supporting the demand for an enquiry, and elicited the information that none of the raiders had come over London at a lower altitude than 13,000 ft. It was due to the great size of the machines that they appeared to be lower. He insisted that the expansion in our output of aeroplanes should have been secured earlier.

Colonel Sir J. Norton Griffiths pointed out that while it was possible to secure effective command of the air in the battle zone, it was impossible to secure a general command of the air. Even in the battle zone it was impossible to prevent enemy aeroplanes from coming over our lines. He gave his own experiences confirming the vital point that we maintained our supremacy at the front.

Mr. Claude Lowther asked for more cohesion between our air and land defences. Sir W. Pearce expressed the view that the Government ought to take further steps for the defence of London.

Lord Hugh Cecil pointed out that London was far more accessible to the Germans than any large German centres were to us. We could bombard Brussels if we chose, but that would only injure a friendly population. The air problem was a purely military problem, and the judgment of the military experts ought to prevail.

The Chancellor of the Exchequer, answering questions put by Mr. Lambert, said that in the opinion of our experts our types of machines were as good as the

Germans'. He profoundly disagreed with the view expressed in the debate that the Prime Minister's speech might have been made in public, as the most vital though not the longest passages in it were essentially of a secret character. He pointed out that the French section of the Allied front was much nearer to important German cities than ours, and that it was therefore natural that the French should play a larger part in offensive operations against the cities, as indeed they had done with great success and remarkable immunity during the last few days, 84 machines having heavily bombed six German towns with only

two casualties. He certainly did not treat these raids on London as of no importance, but it was the balance of military advantage that had to be considered, and if a choice had to be made the Army must come first. When people demanded the instant production of vast numbers of aeroplanes they were apt to forget the inherent limits to the extent and rate of such an increase and the imperative demands of other services.

The motion for the adjournment was talked out, and the House adjourned at 11.7 p.m.

CORRESPONDENCE.

Reprisals and the Internment of Germans.

[1937] The warning in your leader on Reprisals has been tragically fulfilled by the raid on Harwich. As you say that Mr. Kernahan does not like the word "reprisals," may I mention that, in using instead the term "defensive deterrent acts," I had in mind the scruples of the large number of folk who are against such policy, and so possibly (they are not without influence, these good folk) may cause the Government to hesitate? It was to put matters in another light, and so perhaps to allay those scruples, that I wrote as I did.

Long ago I said in print that I believed our superb flying men would be the final factors in victory. To drive the Boche out of Belgium and France, and back into his own "Father-of-Lies-Land" as I once called Germany, will, one fears, be a long and bloody business. So long as the German Navy refuses to give battle, a naval decision also is delayed. The way out of the *impasse* is surely to accomplish the invasion of Germany (the only means effectively to bring their crimes home to the German people) by the air. In regard to the scruples of which I have spoken, we are bombing Belgian towns, in German occupation, and thus unfortunately causing casualties among civilians. If casualties there must be, it is better that they fall on enemies rather than on our friends and allies.

To the experts must be left the decision whether and when such air offensive be possible, for it is one on which a layman cannot speak. But that such offensive will come, and will succeed, seems to me certain. Meanwhile one cannot help wondering that so patriotic and cautious a statesman as Lord Derby should have said publicly that our air defences are not as yet strong enough, effectively to protect the country, which seems to me a little like "asking for it." I should have thought such an admission might encourage Germany, if not to make hay, at least to make murder-history, while her sun shines.

If Lord Derby be right, and I am not attacking him personally, as one fears he is, the admission is astounding. No far-seeing person could have failed, long ago, to recognise the decisive part which aircraft, defensive and offensive, were destined to play in the war. It was the duty of those in authority to see that we had enough and more than enough for all our needs. Though money has been poured out like water, the country has grudged nothing for vital necessities such as aircraft. To admit, after three years of war, that there are not enough to go round, that, to defend England,

aircraft must apparently be recalled from the front, is as if the captain of a fire brigade has excused his failures to a corporation which had denied him nothing for which he asked by pleading that he had no fire engines. Our airmen themselves are superb. Words fail us to express admiration of their heroism. For the authorities to plead a shortage of machines, at this stage of the war, is not inexcusable. It is damnable, and those responsible should be in the dock on the charge of criminal neglect of duty.

Reverting to Lord Derby's admission, I shall be asked: "Do you imagine that the Germans don't know?" I reply: Of course they know, and always will know so long as we allow Germans in our midst. After the Folkestone raid, a well-known resident, who had lost a relative thereby, and had his place of business demolished, told us that two Germans, "grinning all over their faces," came to survey the ruins. Law-abiding as we Britons are, there is a limit to our endurance, and had he strangled, then and there, one or both of the grinning Germans, one could hardly blame him. None the less, he would have had to stand his trial for murder, the penalty for which is usually hanging. And all the time the someone who ought to be hanged, is the person, or persons, who, dead against the demand of the nation, allow the enemy to stroll about, and to spy upon us, undisturbed. One day there will be murder done, if murder, under such provocation it can be called, and Britons will have to suffer. If only for those Britons' protection, since it does not do to try human nature too far, the demand for the internment of every German must be urged and re-urged, until the Government act. I am not in favour of Government by public clamour, but this is a matter on which the nation is at one. Why wait for more anti-German riots, for more murdering of our women and children from the air, for more passing of information into Germany, whereby our ships can be sunk, and, possibly even, military information be conveyed for the defeating of our plans at the front, and for more of our heroic fighting men to make unnecessary last sacrifices? Mine is only one voice, and an unimportant one, but I raise it here as elsewhere, and as I have from the outbreak of war, in the hope that some who read may be induced to add their voices to mine, to bring pressure to bear to the same effect upon their Member of Parliament, and in public and in private to demand the internment of all Germans.

COULSON KERNAHAN.

Savage Club.

"One of Our Best Air Officers."

LIEUT. DOSSENBACH, who is regarded by the Germans as one of their best air officers, it is announced under date July 5th from Berlin, has been killed in an air fight.

Zepp. Collides with Aeroplane.

A DUTCH correspondent reports from Amsterdam a collision between a Zeppelin and an aeroplane on July 4th, over Ghent Aerodrome. The aeroplane was destroyed and fell, the two airmen being killed. The Zeppelin was damaged, and was compelled to land. One propeller was broken in landing.

Over Holland Again.

ON July 4th, a German airship, the "L.44," was, says the *Nieuws van den Dag*, seen flying above places in the province of Groningen, Holland.

"The Elementary Principles of Wireless Telegraphy."

WIRELESS telegraphy is so closely allied with aviation that many who are taking up the latter also have to have a working knowledge of the former, and to them Mr. R. D. Bangay's "Elementary Principles of Wireless Telegraphy" should prove exceedingly useful. In simple language, the author has endeavoured to deal with all parts of the transmitting and receiving apparatus in such a way as to make the student practically acquainted with the why and wherefore of the apparatus entrusted to his care. The work is one which has

already fully proved its merit, and in the latest edition, while the scope has been extended, the same principles have been kept in view. For convenience, it is now divided into two parts, either of which can be had separately, but as the price of the complete work is so reasonable, there will be few who will seek to take advantage of this arrangement.

Part I opens with a very simple and lucid explanation of electricity and magnetism, and then goes on to deal with wave motions, the production of waves and high-frequency oscillations, &c., coupled oscillatory circuits, the wavemeter, receivers, buzzers, detectors, aeriels, &c., the remarks, whenever necessary, being illustrated by simple diagrams. In Part II a clear little exposition is given of the nature and meaning of curves and graphs which should enable almost anyone to understand these awe-inspiring illustrations. The component parts of a transmitter are described separately, and the theory of the condition of resonance under which they can most effectively be combined, and to which each part should be adjusted to form an efficient transmitter, is fully discussed. The theory of the dynamo is explained, and then the transformer is dealt with in a similar way. Other chapters treat of the phase relation between current and E.M.F. in timed circuits, excitation of spark transmitters, spark dischargers and oscillation valves. The books, published by Wireless Press, Ltd., are usefully bound in cloth, and are priced as follows:—Part I, 1s. 6d.; Part II, 2s. The two can be ordered from "FLIGHT" Offices, for 4s. post free.

Personals

Casualties.

News of the death of Second Lieutenant F. W. EVANS, of the R.F.C., who lived at Muswell Hill, has been conveyed by Germans, who dropped a message over our lines. The officer was first reported missing, but upon the information of the enemy the War Office notified the relatives of his death from wounds.

Sergeant Pilot LOUIS GRAY, R.F.C., aged 24, who was reported missing on June 7th, is now reported to have been killed in action on that date. Sergt. Gray, who was the son of Mr. and Mrs. Lewis Gray, 73, Union Grove, Aberdeen, joined the Army shortly after the outbreak of war, and had seen a good deal of service overseas. He served his apprenticeship with Messrs. W. M'Kinnon and Co., engineers, Spring Garden, Aberdeen, and when quite a young man he became interested in the problems of flight, being an enthusiastic modeller. Sergt. Gray gave an exhibition with gliders at the Royal Horticultural Society's Show in the Duthie Park about seven years ago, and was awarded a special prize.

Second Lieutenant EDWARD DENISTON HALLER, R.F.C., only son of the late Mr. Thomas Haller, and of Mrs. Haller, Burnside, Newland Park, Hull, has been killed in action. He was educated at Hull Grammar School, and was 22 years of age.

Major LANOE GEORGE HAWKER, V.C., D.S.O., R.E., attached R.F.C., who was reported missing last November, is to-day officially reported killed. Born in 1890, he was the second son of the late Lieut. Henry Colley Hawker, R.N., and Mrs. Hawker, and a grandson of the late Peter William Lanoe Hawker, of Longparish House, Hants. He obtained his commission in the Royal Engineers in July, 1911, was promoted lieutenant in October, 1913, and joined the R.F.C. in October, 1914. He was awarded the D.S.O. for conspicuous gallantry on April 19th, 1915, when he succeeded in dropping bombs on the German airship shed at Gontrode from a height of 200 ft., in perilous circumstances. He displayed remarkable ingenuity in using an occupied German captive balloon to shield him from fire while manoeuvring to drop the bombs. In the following July he won the V.C. On the 25th of that month, when flying alone, he attacked three German aeroplanes in succession. The first managed eventually to escape, the second was driven to ground damaged, and the third, which he attacked at a height of 10,000 ft., was driven to earth in our lines, the pilot and observer being killed.

Second Lieutenant FAIRLIE RUSSELL MARTIN, Royal Scots Fusiliers, attached R.F.C., the only child of Fleet Paymaster W. E. R. Martin, R.N., C.M.G., and Mrs. Martin, was educated at Bedford and Sandhurst. He joined his regiment in April, 1916, and went to the front in the following July, serving with his battalion throughout that year's offensive and in the fighting in the early part of 1917. Last March he was attached to the R.F.C., and was killed on June 29th, aged 19, while carrying out important work for which he had been specially selected on account of his excellence as an observer.

Captain WILLIAM ERIC NIXON, K.O.S.B., attached R.F.C., eldest son of the Rev. W. H. Nixon, vicar of Winster, now Senior Chaplain of the Forces, and Mrs. Nixon, was born in 1897, and educated privately and at King William's College, Isle of Man, where he was captain of the school in 1913-14. He entered Sandhurst by nomination in May, 1915, passed out in November, and was gazetted second lieutenant, being promoted captain in November, 1916. He was twice mentioned in despatches and three times wounded in action. On May 7th he was reported missing, and is now reported to have been killed while leading his flight. He was buried by the German Divisional Chaplain, with military honours, in the churchyard at Masny, near Douai, on May 11th.

Captain LIONEL SYDNEY PLATT, Lancers, attached R.F.C., the only son of Mr. and Mrs. Sydney Platt, of Wargrave Manor, Berks, was born in 1885, and educated at Eton and Magdalen College, Oxford. He obtained his commission in the 17th Lancers in 1905, and served with them in India, and distinguished himself as a gentleman rider. He was appointed adjutant of the Denbighshire Yeomanry in 1913, and served with them at home and in Egypt. He joined the R.F.C. in

September, 1916, got his wings in November, and went to the front in December. In March he was gazetted flight-commander, and was killed on April 13th while leading his flight on a reconnaissance. In 1914 Captain Platt married Miss Gillian Warwick, and leaves a daughter.

Second Lieutenant JAMES EDWARD POWER-CLUTTERBUCK, Royal Field Artillery, attached R.F.C., killed in action, was the son of Mrs. Power-Clutterbuck, of Newark Park, Gloucestershire, lady of the manor of Ozleworth, and was born in 1893. He got his commission in the Royal Artillery in January, 1915, and recently was attached to the Flying Corps.

Second Lieutenant JAMES PEDRAZA STEPHEN, R.F.C., who was killed on May 23rd, aged 19, was the second son of Mr. A. G. Stephen, manager in Shanghai of the Hongkong and Shanghai Banking Corporation. He was educated at Dollar Academy and Glenalmond, where he was captain of the Rugby fifteen, 1915-16, and Pipe-Major to the School Cadet Corps. He received his commission in the R.F.C. in May, 1916, and after obtaining his wings joined the Army at the front in October, 1916.

Lieutenant HAROLD KEITH SYKES, Royal Fusiliers, attached R.F.C., who died at a casualty clearing station on June 29th, of injuries received while flying on June 23rd, aged 25, was the eldest son of the late J. D. Sykes, of Messrs. Few and Co., London. He was educated at Sevenoaks and Haileybury College. When war broke out he was studying law, but at once joined the D.C.L.I. He obtained his commission in the Royal Fusiliers on February 26th, 1915, and went to France in July, 1915. He was wounded on July 15th, 1916, and after some months in hospital joined the R.F.C., obtained his wings, and went to the front. His younger brother, Capt. R. A. Sykes, Royal Fusiliers, died of wounds two months previously.

Captain GUY STAFFORD THORNE, R.F.C., missing since March 18th, brought his aeroplane and observer safely to earth on that day, but died of wounds shortly afterwards. He was born in 1882, was educated at Wolverhampton Grammar School, and became an electrical engineer. He obtained the appointment of engineer to the Chinese Government Power and Light Station at Canton. Shortly after the war broke out he obtained leave of absence, and was given a commission in the R.F.C. He became an expert pilot, soon attaining the rank of Captain. He was the second son of the late Edwin Henry Thorne, solicitor, of Wolverhampton (himself a Lieutenant-Colonel in the T.F.), and Mrs. Thorne, of The Roseries, Down Road, Bexhill, whose only other son, Lieutenant-Colonel Harold Underhill Hatton Thorne, was killed in action on May 9th. He married, in November last, Mary Gwendoline Charlotte, only child of Commander Hillman, R.N., of Invergordon.

Second Lieutenant WILLIAM KENNEDY TROLLOPE, R.F.C., who died on May 3rd of wounds received in action on April 3rd, was the younger son of Mr. John E. Trollope, F.R.I.B.A., of Esher. Born in 1896, he was educated at St. Christopher's, Eastbourne, and Uppingham. He received his commission in the R.F.C. in May, 1916, and being gazetted flying officer in July, 1916, proceeded to the front. He had been out over the enemy's lines and was returning when he was attacked by five German aeroplanes at a height of 5,000 ft. His observer was killed, and he was shot in the abdomen. The machine, however, made a marvellous landing just inside our lines, but upside-down. The machine was being shelled on the ground by the enemy when an infantryman went bravely out to bring Lieutenant Trollope in. The man found him alive, but unconscious, and in carrying him to safety was himself dangerously wounded.

Flight Sub-Lieutenant DAVID ALAN DUNCAN, R.N.A.S., was the only child of Lieut. G. H. F. Duncan, of 3, York House, Kensington, and Afton Lodge, Freshwater, Isle of Wight, and formerly of Valparaiso, Chile, and the late Mrs. G. H. F. Duncan, and was 21 years of age. Mr. Duncan, who was killed in an accident while flying on June 2nd, was born at Valparaiso, and was educated at the Charterhouse, Trinity College, Cambridge, and Sandhurst. He entered the cavalry in 1915, and subsequently joined the R.N.A.S.

Major GERALD DESMOND MILLS, R.F.C., who died as the result of an aeroplane accident abroad, aged 26, was the youngest son of Canon Mills, of Bennington Rectory, Herts. He was educated at Haileybury College, and having passed through Sandhurst obtained a commission in October, 1910, in the Sherwood Foresters, in which regiment his elder brother was killed in the South African War. He served 3½ years in India, and, returning home on leave in March, 1914, joined the R.F.C., and obtained his flying certificate. He was gazetted flight commander in March, 1915, and went to France in the following month, and was mentioned in despatches. He returned as instructor at the Central Flying School in January, 1916, and was gazetted squadron commander in March, 1916. He was appointed to command the Test Squadron in July, and went to the Air Board Office last March, and shortly after applied for work on active service. He went to the front on May 15th, and was killed four days later.

Flight Sub-Lieutenant JAMES THEODORE SIMS, R.N.A.S., who was killed on May 26th, aged 30, as the result of an accident while flying, was the elder son of the late James Sims and Mrs. Sims, of Redruth, Cornwall. He was educated at Plymouth College, and afterwards proceeded to West Africa, where he became the manager of a mine. He was at home on leave at the outbreak of war, and at once enlisted in the Duke of Cornwall's Light Infantry, but obtaining a commission as Sub-Lieutenant, R.N.V.R., joined the R.N.A.S. in October, 1915, as an observer. After training he was sent to Dunkirk, and distinguished himself by the photographs he took in the air under heavy shell fire, receiving the Croix de Guerre (with Palm) and being presented to the King by the Vice-Admiral in Command. Early this year he applied to be trained as a pilot, and became Probationary Flight Officer, being afterwards promoted Flight Sub-Lieutenant.

Second Lieutenant ERIC ST. CLARE SMITH, R.F.A., attached R.F.C., formerly for five years a member of the H.A.C., was accidentally killed while flying as an observer in England on

July 2nd, aged 25. He was the youngest and only surviving son of Mr. and Mrs. Enos Smith, of 124, Earlham Grove, Forest Gate. At the outbreak of war he served with a battery of the H.A.C., and was in Egypt for eight months, returning home to take up his commission in November, 1915, and being gazetted to the R.F.A. on December 10th, 1915. Leaving for France early in 1916, he was attached to Divisional Artillery. In the Somme offensive he served with the heavy trench-mortars, afterwards moving to Flanders. He recently volunteered as an observer in the R.F.C., and was sent home for training a few weeks ago.

Married and to be Married.

The engagement is announced of Captain A. J. MICHELL CLARKE, Gloucester Regiment and R.F.C., son of Dr. and Mrs. J. Michell Clarke, of Clifton, Bristol, and EILEEN BUCHANAN NJAL, only daughter of Mr. and Mrs. HAROLD NEILL, of 22, Eldon Road, Kensington, W.

The marriage of Baron ALPHONSE HEYKING, Russian Consul-General in London, and Miss KATHERINE (KITTY) LEEFE ROBINSON, daughter of Mr. and Mrs. Horace Robinson, of South Coorg, India, took place on July 3rd, at the Swedish Lutheran Church, Harcourt Street, Marylebone. The bride, who was accompanied by Miss Ogilvy Lamb, wore a coat frock of grey cloth, embroidered on the corsage, the shoulders, and the cuffs with wings of the R.F.C., in honour of her brother, Capt. W. Leefe Robinson, V.C.

Items.

The will of Major JOHN BURGH TALBOT LEIGHTON, M.C., Scots Guards and R.F.C., of Loton Park, near Shrewsbury, who died from wounds, has been proved at £47,901.

UNDER the will of Lieutenant SYDNEY STRETTON, R.F.C., of Hammerwich, Staffs, who died in hospital, the property to which he would succeed on the death of his mother is given to his brother and sisters, and the residue left to his fiancée, Miss Dorothy Mary Cordelia Arliss, of Crofton Lodge, Venner Road, Sydenham. The will is sworn at £18,816.



FATAL ACCIDENTS.

An inquest was held at Napsbury War Hospital, Hertfordshire, on July 3rd, regarding the death of Capt. C. W. E. C. Hamilton, R.F.C. Capt. G. W. Allen, R.F.C., said he saw Capt. Hamilton ascend. He himself had been up in the same machine on the same afternoon, and had had no trouble with it whatever. Ten minutes after the ascent, when Capt. Hamilton was 5,000 ft. up, the machine began to dive and then swerved to the right, got out of control, and began to fall. Capt. S. McClintock said this particular machine was rather kept aside for instructions, and was particularly well looked after. The jury returned a verdict of "Death from Misadventure."

2nd Lieut. E. St. Clair Smith, R.F.C., was killed through a fall of his machine at Addlestone on July 3rd. He was acting as observer, and Sergt. Willson, his pilot, was conveyed to hospital suffering from grave injuries to his head and internally. The machine was several thousand feet up when it crashed to the ground.

Prob. Flight Officer H. J. Flinn was killed while flying at Minster on July 5th.

2nd Lieut. W. T. G. Moss, Gloucestershire, attd. R.F.C., of Bradford, Yorks, aged 18, was also killed on July 5th, near Cirencester.

A third fatality occurred at Birmingham, 2nd Lieut. L. N. Fletcher, of Newcastle-on-Tyne, being killed, and 1st Air-Mech. Merritt, who accompanied him, was seriously injured. At the inquest, when a verdict of "Accidental

Death" was returned, the jury warmly commended 1st Air-Mech. Merritt, who made a gallant attempt to get Lieut. Fletcher, out of the aeroplane, which was burning fiercely.

2nd Lieut. O. D. Haist, a Canadian, was killed at an East Anglian flying ground on July 7th, through trying to rise before flying-speed had been attained.

Lieut. Elliott, R.F.C., who was killed while night flying in Yorkshire, was buried at North Finchley on July 7th.

On July 6th, at a Yorkshire inquest, the death of 2nd Lieut. K. J. Vick, R.F.C., aged 28, who was killed in an aeroplane accident, was inquired into. An officer said he did not know the exact cause of the accident, but a Special Accidents Committee from London would investigate, and the decision rested with that committee.

A Jurymen: What is the constitution of this Special Accidents Committee—is it formed of experts or is it purely military?

The Coroner: It is a military body.

The military witness also stated that relatives of men killed accidentally would not be allowed to be present at the inquiry.

The jury, in returning a verdict of "Accidental Death," stated that there was no valid reason why parents should be refused admission to such inquiries, or why an English jury should pass a verdict when they had no knowledge of the cause of the accident. Even public inquests into the causes of loss of life were now to be put under military control.



The Grimsby Baby Show Accident.

DURING a review of babies in the People's Park, Grimsby, on July 5th, in connection with the National Baby Week, an aeroplane which had been dropping pamphlets alighted in a field close by, causing a crowd to assemble. A second aeroplane, which was descending, in trying to avoid the people, collided with a hedge and knocked down a woman named Simpson, seriously injuring a two-years-old child in her care, named Lewis. The child subsequently succumbed to its injuries.

A Cap of Note.

LIEUTENANT NUNGESSER, the French pilot who has

scored so heavily against Hun pilots, has presented his military cap to the London Committee of the French Red Cross, to be sold on France's Day, on Saturday, at a Thé Chantant in the Royal Automobile Club, which will be open by invitation.

Lieutenant Nungesser, whose many decorations include the Legion of Honour, the Military Medal and Cross, and the Cross of War, and has accounted for over forty German aeroplanes, is at present on a visit to this country. He probably felt all sorts of things during last Saturday's raid, with a longing to be up and at the piratical visitors.

The British Air Service

"PER ARDUA AD ASTRA"

UNDER this heading are published each week the official announcements of appointments and promotions affecting the Royal Naval Air Service and the Royal Flying Corps (Military Wing) and Central Flying School. These notices are not duplicated. By way of instance, when an appointment to the Royal Naval Air Service is announced by the Admiralty it is published forthwith, but subsequently, when it appears in the LONDON GAZETTE, it is not repeated in this column.

Royal Naval Air Service.

Admiralty, July 3rd.

The following have been promoted to Wt. Officers (II), temp. seniority June 30th: C. P. O. (I.) T. Willis, A. W. Harris, C. W. Booth, C. H. Potts, W. H. Golder, G. Wilson, A. R. Caldicott, J. W. White, W. Fenton, S. F. Cole, H. H. S. Scott, P. R. Pratt, E. Whittlesea and J. W. Bell. C. P. O. (II) A. J. Corbitt, J. A. Anderson, H. R. Hutt, H. E. Davies, J. Wall, A. P. Steer, B. Turner, A. E. Pink, W. H. Sayer, G. J. Cannon, A. O. Binding, D. A. Campbell, H. J. Brown, A. H. Harrison, M. C. Head, A. P. Marchant, G. Lambourne, J. Wesley, W. W. Whitehead, A. M. Webster, H. Harper, G. P. Abbott, S. T. Littleton, and H. Buxton; L. J. Lester, F. Carey, C. S. Richards, E. W. Mann, A. T. Watts, E. C. Aslen, A. H. Mitchell, E. H. Rundle, F. W. Hudson, J. W. Wood, G. Lee, S. Kennedy, S. King-Smith, H. A. Blackburn, R. W. Winfield, L. C. Dowse and F. J. Knowler. C.P.O.: H. T. Duke and H. C. Gammon (R.M.L.L.).

London Gazette Supplement, July 3rd.

With reference to the notice which appeared in the Gazette of June 26th, page 6289, the following Officers have been granted temp. commissions as Ob. Lieuts., with seniority as shown, and not as Ob. Sub-Lieuts. as therein stated: V. Greenwood; April 29th, 1916. E. B. C. Betts, D.S.C.; Feb. 23th. D. P. Rowland; April 1st.

Admiralty, July 4th.

The following Prob. Ob. Officers have been promoted to Ob. Sub-Lieuts., seniority as stated: F. C. F. Walwyn and E. V. White; Feb. 28th. A. Gordon; Mar. 16th. T. Terrell, J. J. W. Nicholson, F. W. Pickup and W. R. Stennett; all May 30th.

Temp. Prob. Flight Officer E. A. Rudd granted a temp. commission as Sub-Lieut. (R.N.V.R.), seniority June 13th.

J. E. Beveridge entered as Prob. Flight Officer (Temp.), seniority June 26th. Eng.-Room. Art. (4th Cl.) A. D. Reid entered as Warrant Officer, 2nd Gr. (Temp.), seniority July 8th.

Temp. commissions as Lieut., R.N.V.R., have been granted to G. B. Mann, A. W. Stone and W. Seed, all seniority July 3rd.

Admiralty, July 5th.

Sqdn. Comdr. (Actg. Wing Comdr.) W. Briggs promoted to rank of Wing Comdr., seniority June 30th.

Lieut.-Comdrs. (Temp., R.N.V.R.) C. H. Meares and C. Kirby both promoted to Comdrs. (Temp.), seniority June 30th.

Lieuts. (Temp., R.N.V.R.) P. L. Teed, G. C. Neilson, G. F. Herron, W. Burningham-White, E. Hogg, E. R. Peal, D.S.C., S. Flower, E. N. G. Morris, V. C. H. Longstaffe, P. L. H. Dodson, J. E. Coates, R. D. Carey, H. G. Atkinson, P. Blair, C. H. Parkes, Viscount Tiverton, J. H. Curwen, W. J. S. Lockyer, W. G. Chambers, T. F. Norbury, W. H. Adkins, F. T. Ashford, A. Partridge, C. R. Andrews, C. R. Abbott, G. M. T. Rees, C. J. Murfitt, A. F. Sidgreaves, M. H. P. Allen, J. D. Kestler, J. P. A. Waller, H. A. R. Norton, R. Bull, A. S. Hellawell, A. S. Langley and W. Wright, all promoted to Lieut.-Comdrs. (Temp.), seniority June 30th.

Sub-Lieuts. (Temp., R.N.V.R.) J. D. Greenwood promoted to Lieut. (Temp.), seniority April 1st. J. T. Chitty, C. H. Nelson, A. L. Howarth, A. B. Hatton, B. J. Beeton, J. Ree, S. H. Brazier, N. V. Wrigley, R. F. Osborne, C. C. Clarke, E. A. Wadsworth, A. J. Willson, C. F. Smith, N. W. Hughes, J. D. Fry, J. D. Whitelaw, A. A. Bryce-Buchanan, H. G. J. de Whalley, A. B. Murray, C. H. Swann, P. M. Davison, J. W. Morley, C. A. Crow, H. G. P. Rees, A. M. Humble-Crofts and W. T. Morris, all promoted to Lieut. (Temp.), seniority June 30th.

Ob. Sub-Lieut. (Temp.) D. R. W. Thompson promoted to rank of Ob. Lieut. (Temp.), seniority April 2nd.

The following Prob. Flight Officers (Temp.) have been promoted to rank of Flight Sub-Lieut. (Temp.), seniority as stated: P. Wickens; Mar. 30th. C. H. Weir; April 13th. G. L. Trapp; April 29th. H. B. Maund and D. H. Daly; May 13th. R. B. L. Davies, G. Peach and W. M. Davidson; all May 30th. G. P. W. Earle, C. P. Brown, R. F. Stallard, J. F. R. Kitchen, V. H. Clift, J. E. L. Hunter, F. S. Strathy, J. H. Forman and O. W. Redgate; all June 13th.

B. S. Cohen, A.M.I.E.E., granted a temp. hon. commission as Lieut., R.N.V.R., seniority July 5th.

London Gazette Supplement, July 6th.

Temp. Prob. Flight Sub-Lieuts., to be Temp. Flight Sub-Lieuts.: T. C. Angus; Sept. 11th, 1915. R. V. Weeks; May 14th, 1916. L. E. Lander; May 28th, 1916. J. Gamon; July 30th, 1916.

Admiralty, July 7th.

The following have been entered as Prob. Flight Officers (Temp.), seniority as stated: J. J. O'Loughlin; April 25th. R. S. Gregory; July 9th.

H. D. Stanton granted temp. commission as Lieut., R.N.V.R., seniority July 9th.

Admiralty, July 9th.

Temp. Lieut. (R.N.V.R.) J. Ree, entered as Prob. Ob. Officer (Temp.), seniority July 14th.

Signaller (R.N.V.R.) A. E. Davis, entered as Prob. Flight Officer, seniority July 15th.

The following have been entered as Prob. Flight Officers, seniority as stated: E. E. Black, June 24th. B. Brewer and I. C. Sargent; July 1st. L. G. Galloway (Temp.); July 2nd.

The following temp. entries (R.N.V.R.) have been made, seniority as stated: Lieuts.: F. R. Arthur; July 5th. E. W. Wilkins; July 7th. Sub-Lieut.: C. F. S. Gamble; July 7th.

E. H. Cook granted a temp. commission as Lieut. (R.N.V.R.), seniority July 5th.

Royal Flying Corps (Military Wing).

London Gazette Supplement, July 3rd.

The following appointments are made:—
Flight-Commanders.—From Flying Officers: Lieut. H. A. Fordham, North's Fus., and to be Temp. Capt. whilst so employed; June 14th. Lieut. (Temp. Capt.) C. T. Vachell, Mon. R. (T.F.), and to retain his temp. rank whilst so employed; June 17th. From Flying Officers, and to be Temp. Capt. whilst so employed: Temp. Lieut. C. Fairbairn, Gen. List; 2nd Lieut. M. Johnstone, S.R.; June 21st.

Flying Officers.—Capt. J. A. Morrice, R.F.A. (T.F.), and to be sec'd.; April 9th. Temp. 2nd Lieut. G. M. Johnstone, Gen. List; May 9th. Capt. F. H. Laurence, Worc. R., S.R., and to be sec'd.; May 23rd. 2nd Lieut. D. Lindsay, A. Cyclist Corps, from a Flying Officer (Ob.); June 2nd, seniority July 6th, 1916. Temp. 2nd Lieut. A. V. Pearman, Gen. List; June 8th.

Temp. 2nd Lieut. G. T. Richardson, Gen. List, from a Flying Officer (Ob.), seniority May 16th, 1916; Temp. 2nd Lieut. (on prob.) C. H. Smith, Gen. List; June 10th. Temp. 2nd Lieut. A. N. Martyn, Gen. List, from a Flying Officer (Ob.); June 11th, seniority Sept. 11th, 1916. Temp. 2nd Lieut. (on prob.) J. P. Owen-Holdsworth, Gen. List; Lieut. W. L. O. Parker, Hrs., S.R.; Temp. 2nd Lieut. H. M. Gibbs, Gen. List, from a Flying Officer (Ob.), seniority Aug. 3rd; Temp. 2nd Lieut. (on prob.) D. J. Reason, Gen. List; Temp. 2nd Lieut. (on prob.) C. A. Bainbridge, Gen. List; Temp. 2nd Lieut. (on prob.) W. H. Taylor, Gen. List; Temp. 2nd Lieut. (on prob.) J. D. d'A. Northwood, Gen. List; June 12th. Temp. 2nd Lieut. H. Morley, Gen. List; Temp. 2nd Lieut. (on prob.) H. A. Edwards, Gen. List; 2nd Lieut. (on prob.) K. W. Payne, S.R.; Capt. R. T. Townsend, Can. A.P.C.; June 13th. Temp. 2nd Lieut. (on prob.) T. M. Willett, Gen. List, seniority (without pay) April 5th; Temp. 2nd Lieut. (on prob.) C. D. W. Bayley, Gen. List; June 14th.

Equipment Officer, 3rd Class.—and Lieut. W. Sharp; Oct. 12th.

Schools of Military Aeronautics.

Instructor (graded as an Equipment Officer, 1st Class).—2nd Lieut. (Temp. Lieut.) G. J. Read, N. Staff. R., S.R., from a Flying Officer, to be Temp. Capt. whilst so employed; Sept. 19th (substituted for the notification in the Gazette of Dec. 11th).

Supplementary to Regular Corps.—The following 2nd Lieuts. (on prob.) are confirmed in their rank: A. McD. McBain, C. C. Villa, F. G. Sutton, F. D. Slee, F. J. Sharland, H. E. Rydon and H. F. S. Drewitt.

General List (R.F.C.).—Cadet H. P. Lloyd to be Temp. 2nd Lieut. (on prob.); April 26th.

London Gazette Supplement, July 4th.

The following appointments are made:—
Squadron Commander.—Temp. Lieut. (Temp. Capt.) C. F. Portal, M.C., R.E., S.R., from a Flight-Comdr., and to be Temp. Major whilst so employed; June 16th.

Flight-Commanders.—From Flying Officers: Temp. 2nd Lieut. (Temp. Lieut.) I. G. Davies, Gen. List, and to be Temp. Capt. whilst so employed; May 30th. Lieut. (Temp. Capt.) G. M. Croil, Gord. Highrs. (T.F.), and to retain his temp. rank whilst so employed; Capt. E. A. de Pass, Yeo. (T.F.); June 18th. From Flying Officers, and to be Temp. Capt. whilst so employed: Temp. 2nd Lieut. (Temp. Lieut.) C. H. Stocks, Gen. List; June 20th. Lieut. M. D. G. Scott, N. Lan. R., S.R.; June 21st.

Flying Officers.—Temp. 2nd Lieut. (on prob.) E. Holdsworth, Gen. List; May 28th, seniority (without pay) April 5th (substituted for the notification in the Gazette of June 18th). Temp. 2nd Lieut. R. N. L. Munro, Gen. List; Feb. 16th. Temp. 2nd Lieut. R. G. Malcolm, Gen. List; Feb. 24th. Temp. Lieut. E. R. Cottier, Gen. List, from a Flying Officer (Ob.), seniority July 15th, 1916; 2nd Lieut. C. O. Fedden, Ind. Army Res. of Officers; May 10th. 2nd Lieut. W. H. Weller, S.R.; May 15th. 2nd Lieut. F. D. Slee, S.R.; May 17th. 2nd Lieut. R. V. Gove, Ind. Army Res. of Officers; May 18th. 2nd Lieut. R. S. L. Boote, R.A., and to be sec'd.; May 21st. 2nd Lieut. W. H. Coates, Auckland Mounted Rif., N. Zealand Mil. Forces; Temp. 2nd Lieut. (on prob.) N. F. Clarke, Gen. List; May 30th. Lieut. T. H. P. McKewen, Sea. Highrs. and to be sec'd.; May 31st. Temp. Capt. A. W. Field, Gen. List, from a Flying Officer (Ob.), seniority April 29th, 1916; Lieut. A. H. Bailey, Can. Mach. Gun Corps; June 1st. Capt. J. McA. M. Pender, Sea. Highrs. (T.F.), and to be sec'd.; June 2nd. 2nd Lieut. F. D. C. Gore, S.R.; June 4th. Temp. 2nd Lieut. (on prob.) F. A. Biner, Gen. List; Temp. 2nd Lieut. (on prob.) W. E. de B. Diamond, Gen. List; Temp. 2nd Lieut. W. A. Taylor, Gen. List, from a Flying Officer (Ob.), seniority July 31st, 1916; June 6th. Temp. 2nd Lieut. (on prob.) J. P. White, Gen. List, seniority (without pay) April 5th. 2nd Lieut. (on prob.) H. B. D. Snelgrove, S.R.; Temp. 2nd Lieut. (on prob.) F. R. Goodearle, Gen. List; Temp. 2nd Lieut. (on prob.) D. G. Money, Gen. List; Temp. Lieut. H. Barningham, N. Lan. R., and to be transf'd. to Gen. List; June 7th. Temp. 2nd Lieut. (on prob.) S. W. Dronsfield, Gen. List; Temp. 2nd Lieut. (on prob.) G. B. Moore, Gen. List; Temp. 2nd Lieut. (on prob.) H. A. O'Shea, Gen. List; 2nd Lieut. A. L. Daruley, R.G.A. (T.F.); June 8th. 2nd Lieut. (on prob.) P. E. Palmer, S.R.; Temp. 2nd Lieut. (on prob.) F. M. Bradfield, Gen. List; 2nd Lieut. E. C. Johnston, S.R.; June 9th. Lieut. R. P. I. Cochran, Ind. Cav., from a Flying Officer (Ob.), seniority Aug. 15th; Lieut. F. Bullock-Webster, Can. Mach. Gun Corps; June 10th. 2nd Lieut. C. P. F. Lawson, Rif. Brig., from a Flying Officer (Ob.), seniority Mar. 21st, 1916; 2nd Lieut. (Temp. Lieut.) A. H. Phillips, M.C., Oxf. and Bucks L.I. (T.F.), and to be sec'd.; Temp. 2nd Lieut. J. E. Le Gallais, Gen. List, from a Flying Officer (Ob.), seniority Oct. 3rd; 2nd Lieut. (on prob.) C. C. Villa, S.R.; Temp. 2nd Lieut. (on prob.) D. P. Wilson, Gen. List; 2nd Lieut. F. G. Sutton, S.R.; Temp. 2nd Lieut. (on prob.) W. E. Watts, Gen. List; 2nd Lieut. R. H. Wathes, Notts and Derby R. (T.F.), and to be sec'd.; 2nd Lieut. (on prob.) A. T. W. Lindsay, S.R.; Temp. 2nd Lieut. (on prob.) A. L. Newell, Gen. List; June 11th. Temp. 2nd Lieut. W. A. Barnes, attd. R. Lane, R., and to be transf'd. to Gen. List; 2nd Lieut. W. G. Preston, S.R.; Capt. J. S. G. Collicie, R.F.A. (T.F.), from a Flying Officer (Ob.), seniority Mar. 22nd, 1916; Capt. J. M. Tyrrell, R. Ir. Fus., S.R., from a Flying Officer (Ob.), seniority Mar. 23rd, 1916; Temp. 2nd Lieut. (on prob.) J. B. Finch, Gen. List; 2nd Lieut. (on prob.) C. A. H. Aspinall, S.R.; 2nd Lieut. (Temp. Lieut.) P. C. Purser, M.C., A.S.C. (T.F.), from a Flying Officer (Ob.), seniority July 3rd, 1916; 2nd Lieut. C. E. O. Cowell, E. Lan. R. (T.F.), and to be sec'd.; Temp. 2nd Lieut. (on prob.) F. E. E. Villiers, Gen. List; Temp. 2nd Lieut. (on prob.) W. Casson, Gen. List; Temp. 2nd Lieut. R. G. Clough, Gen. List; 2nd Lieut. (on prob.) M. C. Healy, S.R.; June 12th. Temp. 2nd Lieut. (on prob.) F. W. Gibbs, Gen. List; 2nd Lieut. H. F. S. Drewitt, S.R.; 2nd Lieut. F. J. Sharland, S.R.; Temp. 2nd Lieut. (on prob.) W. T. G. Moss, Gen. List; Temp. 2nd Lieut. (on prob.) C. L. P. Mullany, Gen. List; Temp. 2nd Lieut. (on prob.) C. A. Barber, Gen. List; Temp. 2nd Lieut. (on prob.) C. Pickstone, Gen. List; Temp. 2nd Lieut. (on prob.) J. Machaffie, Gen. List; June 13th. Temp. 2nd Lieut. (on prob.) J. G. Burchett, Gen. List; Capt. H. B. McKinnon, Can. Gen. List; Temp. Lieut. R. T. B. Houghton, attd. Northn. R., and to be transf'd. to Gen. List; Temp. 2nd Lieut. (on prob.) R. C. Ayton, Gen. List; June 14th. Lieut. J. S. Poole, D.S.O., K.R. Rif. C. and to be sec'd.; Temp. 2nd Lieut. (on prob.) R. E. Towler, Gen. List; June 15th.

Flying Officers (Observers).—Capt. R. W. Bruce, Can. Gen. List, from Oct. 21st, 1915, to July 18th, 1916; 2nd Lieut. J. V. Hoskins, Welsh R. (T.F.), and to be sec'd.; June 17th, seniority Feb. 15th. Temp. 2nd Lieut. H. A. Lovett, Notts and Derby R., seniority Feb. 21st, and to be

transfd. to Gen. List; Temp. 2nd Lieut. F. M. Miller, Norf. R., seniority Mar. 3rd, and to be transfd. to Gen. List; 2nd Lieut. G. A. M. Webster, S. Lan. R., S.R., seniority Mar. 10th, and to be sec'd.; June 16th. Lieut. R. O. C. Macdonald, M.C., R.F.A., S.R.; June 17th, seniority Mar. 16th.

Balloon Commanders (graded as Balloon Officers).—From Balloon Officers: 2nd Lieut. (Temp. Lieut.) H. F. Barnes, M.C., R.G.A., S.R., and to retain his temp. rank while so employed; June 15th. Lieut. (Temp. Capt.) J. K. T. Gleu, High. L.I. (T.F.); Temp. 2nd Lieut. H. S. Goodliffe, Gen. List, and to be Temp. Lieut. whilst so employed; June 16th.

Balloon Officers.—2nd Lieut. J. F. Gillam, R.A., and to be sec'd.; May 7th. 2nd Lieut. C. C. French, R.F.A., S.R.; June 12th.

Park Commander.—Qr. Mr. and Hon. Lieut. (Temp. Capt.) J. Starling, R.F.C., and to be Temp. Major whilst so employed; May 1st (substituted for the notification in the Gazette of May 24th).

Equipment Officers, 1st Class.—2nd Lieut. (Temp. Lieut.) A. D. Spiers, S.R., from the 2nd Cl., and to be Temp. Capt. whilst so employed; May 19th. 2nd Cl.: Capt. C. W. Rowe, Cyclist Bn. (T.F.), from a Flying Officer; 2nd Lieut. C. Woodall, S.R., from the 3rd Cl., and to be Temp. Lieut. whilst so employed; May 19th. 3rd Cl.: 2nd Lieut. S. H. Roberts, S.R.; Mar. 6th. 2nd Lieut. (on prob.) H. G. Bell, S.R.; April 24th. Temp. Lieut. J. Stewart, R. Sc. Fus.; May 1st. 2nd Lieut. J. McDonald; June 6th.

Memoranda.—To be Temp. Majors: Temp. Lieut. Comdr. C. R. Ingleby, from R.N.V.R., for duty with R.F.C.; May 14th. Capt. the Hon. M. Baring, R.F.C., S.R., whilst specially employed; July 5th.

To be Temp. 2nd Lieuts. (on prob.) for duty with R.F.C.: G. P. Dalpiaz; April 20th. G. Dickson; June 5th. C. E. Cooper; June 14th. A. Thomson, B. S. Charles, E. B. Crampton, C. F. Soanes, C. W. Mayne, W. H. Savery, G. G. C. Piggott, late Temp. 2nd Lieut. R. Berks. R.; June 20th.

To be Temp. Hon. 2nd Lieut.: J. I. Rikh, for duty with R.F.C.; June 16th. **Supplementary to Regular Corps.**—2nd Lieut. W. W. Lang resigns his commission on account of physical unfitness as a Pilot or Ob.; July 5th.

Machine Gun Corps.

Brigade Machine Gun Officers, R.F.C. (graded for Pay as Assistant Instructors at Hythe).—Temp. Capt. M. G. Millar, M.G. Corps; Temp. Lieut. H. T. Woodhead, M.M. Gun Corps; Temp. Lieut. P. Middlemas, M.G. Corps; 2nd Lieut. A. W. Sutton, Dur. L.I. (T.F.); Feb. 21st. Temp. 2nd Lieut. G. B. Neale, Gen. List; April 20th.

London Gazette Supplement, July 5th.

The following appointments are made:—

Special Appointment (graded as a Squadron Commander).—Temp. 2nd Lieut. (Temp. Capt.) R. M. Hill, M.C., Gen. List, a Flight-Comdr., and to be Temp. Major whilst so employed; April 1st.

Flying Officers.—Temp. Major C. R. Ingleby, Gen. List; May 14th. Temp. 2nd Lieut. A. H. Bird, Gen. List; May 15th. Temp. 2nd Lieut. G. A. H. Parkes, Gen. List; May 20th, seniority (without pay) April 5th. Lieut. W. Hosking, Devon. R. (T.F.), and to be sec'd.; May 26th. Temp. 2nd Lieut. (on prob.) M. West-Thompson, Gen. List; May 28th. 2nd Lieut. (Temp. Lieut.) K. L. Williams, Ind. Army Res. of Officers; 2nd Lieut. (on prob.) J. A. M. Fleming, S.R.; May 30th. Temp. 2nd Lieut. H. F. Lindo, Gen. List; May 31st. Lieut. C. W. MacAloney, Can. Inf., from a Flying Officer (Ob.), seniority Aug. 3rd. Temp. 2nd Lieut. J. B. Hinchcliff, Gen. List, from a Flying Officer (Ob.), seniority Feb. 27th, 1916; Temp. 2nd Lieut. (on prob.) W. Hurst Barnes, Gen. List; June 9th. 2nd Lieut. H. S. P. Walmsley, N. Lan. R. (T.F.), and to be sec'd.; June 10th. Temp. 2nd Lieut. (on prob.) C. H. Noble-Campbell, Gen. List; Temp. 2nd Lieut. (on prob.) H. S. Graves, Gen. List; 2nd Lieut. P. Burrows, Essex R. (T.F.), and to be sec'd.; Temp. 2nd Lieut. (on prob.) N. D. Budgen, Gen. List; 2nd Lieut. (on prob.) N. H. Kemp, S.R.; June 11th. Temp. 2nd Lieut. (on prob.) H. N. G. Dann, Gen. List; Temp. Capt. C. H. C. Keevil, W. York R. (since killed in action); Lieut. R. N. Montagu Stuart-Wortley, Yeo. (T.F.); June 12th. Temp. 2nd Lieut. (on prob.) W. S. C. Smith, Gen. List; Temp. 2nd Lieut. (on prob.) H. G. Tambling, Gen. List; Temp. 2nd Lieut. (on prob.) F. H. Jackson, Gen. List; 2nd Lieut. H. E. Rydon, S.R.; Capt. C. L. Wauchope, Northn. R.; Temp. 2nd Lieut. (on prob.) L. B. Moor, Gen. List; June 13th. Capt. T. E. Withington, Oxf. and Bucks. L.I., from a Flying Officer (Ob.); June 16th, seniority July 26th, 1916. Temp. Lieut. L. F. D. Lutyens, Gen. List, from a Flying Officer (Ob.); June 17th, seniority Sept. 15th, 1916.

Flying Officers (Observers).—2nd Lieut. (Temp. Lieut.) K. K. E. Bonnerjee, R. Suss. R. (T.F.), and to be sec'd.; April 12th, seniority Nov. 27th. 2nd Lieut. (Temp. Lieut.) J. E. Cobb, A.S.C., and to be sec'd.; June 16th, seniority Jan. 6th. Temp. 2nd Lieut. A. E. Turner, M.C., R. War. R.; June 18th, seniority Jan. 22nd, and to be transfd. to Gen. List. 2nd Lieut. V. Westerby, R.A., seniority Feb. 18th, and to be sec'd.; Temp. 2nd Lieut. G. H. Dakes, Lan. Fus., seniority Feb. 25th, and to be transfd. to Gen. List; June 12th. Lieut. G. W. Blacklock, Can. Gen. List; June 18th, seniority April 21st. Lieut. A. N. Jenks, Can. Inf.; June 15th, seniority May 16th.

Supplementary to Regular Corps.—2nd Lieut. G. C. Stones, Aust. Light Horse (since killed in action), to be 2nd Lieut.; Feb. 15th. 2nd Lieuts. (on prob.) are confirmed in their rank: E. P. Fulton, P. E. Palmer and K. W. Payne.

London Gazette Supplement, July 6th.

The following appointments are made:—

Flight-Commander.—Temp. 2nd Lieut. H. P. Dean, Gen. List, from a Flying Officer, and to be Temp. Capt. whilst so employed; June 23rd.

Flying Officers.—2nd Lieut. (Temp. Lieut.) J. E. P. Goode, R. Dub. Fus., from a Flying Officer (Ob.); May 12th, seniority Aug. 26th (substituted for the notification in the Gazette of May 31st). Temp. 2nd Lieut. (on prob.) P. A. de Fontenay, Gen. List; June 9th. Temp. Capt. F. T. Courtney, Gen. List, reverts from Flight-Comdr., to relinquish his temp. rank and to be Temp. Lieut. whilst so employed; July 7th, seniority Mar. 28th, 1916.

Flying Officers (Observers).—2nd Lieut. (Temp. Lieut.) J. R. E. P. Goode, R. Dub. Fus., from R. Ir. Fus., and to be sec'd.; Aug. 26th (substituted for the notification in the Gazette of Mar. 9th). 2nd Lieut. G. T. Henderson, A.S.C., S.R., seniority Feb. 15th; Lieut. E. C. Clancey, Can. Inf., seniority Mar. 3rd; Lieut. V. A. Lanoos, Can. Inf., seniority Mar. 28th; June 16th. 2nd Lieut. H. F. Flowers, R.F.A. (T.F.), and to be sec'd.; June 17th, seniority April 12th. Lieut. A. Hollingworth, Can. Inf.; Lieut. G. Milner, Can. Inf.; June 16th, seniority April 21st. Lieut. G. F. Dracup, Can. Inf.; 2nd Lieut. (Temp. Lieut.) C. A. Hoy, Cyclist Bn. (T.F.), and to be sec'd.; 2nd Lieut. W. Lingard, Manch. R. (T.F.), and to be sec'd.; 2nd Lieut. C. G. Fenton, S.R.; June 17th, seniority May 16th.

Balloon Officers.—Temp. 2nd Lieut. (on prob.) A. S. Anderson, Gen. List; Temp. 2nd Lieut. (on prob.) J. Davidson, Gen. List; Temp. 2nd Lieut. (on prob.) R. H. Tooley, Gen. List; May 30th. 2nd Lieut. D. M. Rourke, E. Kent R. (T.F.), and to be sec'd.; June 15th.

Equipment Officers, 1st Class.—Lieut. (Temp. Capt.) C. Ingram, Cyclist Bn. (T.F.), from the 3rd Cl., and to retain his temp. rank whilst so employed; May 20th. 2nd Lieut. (Temp. Lieut.) O. W. Latimer, from the 2nd Cl., and to be Temp. Capt. whilst so employed; June 15th.

2nd Class.—Temp. 2nd Lieut. D. F. Upjohn, Gen. List, from the 3rd Cl., and to be Temp. Lieut. whilst so employed; Temp. Capt. C. J. Traill, M.C., attd. Sea. Highrs., and to be transfd. to the Gen. List; June 8th.

Memoranda.—2nd Lieuts. (T.F.), to be Temp. Lieuts. whilst serving with

R.F.C.: W. W. Cowan, R. Scots; A. B. Dees, R. W. Surr. R.; A. A. Duffus, and R.H. and R.F.A.; J. G. Fair, Yeo.; F. E. Hills, R.G.A.; J. B. Home-Hay, Arg. and Suthd. Highrs.; J. A. Marshall, Cyclist Bn.; V. F. Stewart, Durh. L.I.; W. L. Wells, Middx. R.; A. R. Wilkie, Middx. R.; Feb. 1st.

Supplementary to Regular Corps.—The following 2nd Lieuts. (on prob.) are confirmed in their rank: S. G. Robinson, W. R. Kells, D. J. Parry and C. G. Fenton.

General List (R.F.C.).—Cadets to be Temp. 2nd Lieuts. (on prob.): A. E. Ikin; May 3rd. M. B. Joseph; May 8th. F. J. L. Bishop; June 1st. K. V. King; June 1st. M. W. Boot, J. F. Cheestman, M. D. Allen, O. A. L. Goode, W. S. Smallwood, T. H. Sommerville, E. W. Walls, W. G. Warwick, A. West, W. E. Wood, A. T. K. Shipwright; June 4th. F. H. Abell, S. A. Alcock, C. Allen, H. J. Bailey, G. W. Barber, A. C. Barton, L. Bertrand, W. Bevan, R. A. Birch, F. C. Bowles, N. Braithwaite, T. C. Broadhurst, E. E. Brown, T. R. W. Bulkeley, G. A. Cawson, F. S. Clarke, R. Coop, C. S. L. Coulson, H. J. Cryer, A. W. P. Cumming, C. B. Campbell, F. Daltrey, T. A. Darrington, P. R. Dawson, N. M. Drysdale, E. Edgar, J. P. Edwards, E. Everatt, R. V. Facey, H. B. Free, E. G. Fry, J. T. Gartside, J. N. Gatecliff, H. M. Gibbon, R. L. Golds, E. C. Haggart, E. C. Harrison, G. W. Hickson, W. S. Hill-Tout, F. J. Hopgood, G. J. Howells, R. H. Humphries, R. T. Irvine, J. G. H. Jackson, U. P. Jonckheers, E. K. Jones, G. Jones, G. A. Jones, G. B. Kettle, A. M. Kinnear, T. F. Lavelle, D. K. Leed, E. S. R. Lennard, J. McC. Lee, J. McD. A. Mackey, W. G. Mann, G. R. Marsden, E. G. Morris, W. H. Nash, H. E. B. Neaves, J. Oliver, R. D. Owen, F. H. Parker, C. C. Paul, A. L. A. Perry-Keene, A. L. Pemberton, E. H. Piper, A. N. Pitchford, H. Preston, G. Rainbow, M. O. Ramsay, J. H. Reeves, L. Renton, J. Robinson, A. F. Rogers, V. G. Stanton, H. R. Stent, F. R. G. Spurgeon, S. L. H. Symonds, M. G. Taylor, J. J. A. Thompson, J. W. Todd, E. K. W. Toogood, R. H. Trelease, R. W. Trubridge, E. V. Tucker, T. H. Turnbull, R. D. Turnell, K. J. Vick, R. D. C. Vincent, H. J. Walkerdine, J. W. Warner, A. H. Warton, J. Waterhouse, C. B. Wattson, C. F. Weaver, J. W. Webberley, H. Weightman, H. T. Wellard, H. W. Westaway, F. E. White, E. Whitfield, L. de V. Wiener, A. P. C. Wigan, J. F. Wightman, A. F. Wilson, C. K. Wilson, J. P. Wilson, T. S. Wilson, J. Wood, J. Worstenholm, J. B. Young; June 7th. N. G. Dobson, C. Gilham; June 11th. S. R. Hanafy; June 13th. H. Cann-Lippincott; June 13th. S. G. Spiro, F. H. M. Francis-Hawkins, E. Wormell, D. W. B. Black, J. E. Blair, D. F. H. Bickell, C. Briggs, B. V. Brown, W. R. Burns, F. W. Butt, S. Caldwell, E. V. Calverley, W. F. Carson, B. R. H. Carter, C. S. Challoner, W. M. Chowne, J. F. Clements, E. D. Dafforn, A. E. Ellis, W. G. Francis, T. A. Ford, L. E. Gawthorne, W. E. Graham, R. E. Greene, J. Hardie, B. Holden, R. B. Hooper, W. A. F. Jackson, J. E. Jones, W. G. C. Jones, D. W. Lane, R. B. Lane, A. G. Lewis, D. G. Lewis, F. M. Livingston, R. MacDonald, R. I. Mansel-Edwards, E. A. Margetson, J. F. W. Nicolson, T. N. O'Calligan, C. M. Powell, E. A. Powell, F. J. Scholfield, E. D. Scott, A. D. Simmons, J. W. Swaby, G. S. Swain, F. H. Thompson, L. W. D. Tratman, A. Traviss, C. P. Virgo, H. C. Vizard, J. McD. Walker, J. C. Welldon, V. M. Yeates, H. N. Young; June 15th. R. Kearton; June 16th. V. H. Nunn June 18th. D. Adams, L. C. R. Alexander, P. Alden, G. Allison-Beer, M. E. Ashton, T. Ashworth, E. T. Baker, A. F. Bartlett, J. C. Bateman, B. G. Beardall, C. Bettinson, H. V. Biddington, C. O. Bird, G. Birkett, J. N. Blacklock, L. D. Bolton, F. F. Bonniwell, G. A. Bower, F. C. Bowles, C. Bowman, G. P. Bradley, R. McC. Briggs, S. J. Broderick, A. J. Broomfield, C. W. E. Browne, R. P. Bufton, C. A. Burpee, H. W. Burry, P. H. Burt, H. Butler, C. F. Campbell, H. K. Capper, S. D. Carpenter, J. J. Carroll, B. H. Caswell, B. E. Catchpole, G. W. Cholerton, A. L. Clark, R. M. Cobb, R. S. Collins, L. E. Collins, W. E. C. Coombs, F. S. Crossley, R. T. A. Cupiss, J. O. Dack, E. D. Dalmaigne, O. Darlington, A. J. Davis, H. F. Davison, H. P. Dawson, W. C. Dennett, J. D. de Pencier, C. H. Dickens, W. H. J. Dodge, C. F. G. Doran, D. C. Doyle, B. J. Earl, J. I. Ellis, C. G. Evans, H. W. Evans, R. Fitton, W. W. Frederickson, M. M. Freehill, E. A. Forbes, G. W. Forbes, E. G. Forder, D. G. Fraser, M. E. Gadd, P. N. H. Garnett, W. R. Gemmill, D. F. Gibbons, J. A. Gibson, H. Greene, G. L. Grey, E. D. S. Grooms, A. G. Grose, R. Grice, G. T. Griffith, G. H. Griffiths, A. B. Griffiths, A. T. W. Goldsmith, M. S. C. Gordon, J. J. Gowing, S. E. Harris, H. H. Hartley, E. T. Heard, J. Hetherington, F. A. Hewens, A. H. Hill, G. L. Hobbs, P. K. Hobson, M. Hopkins, A. B. Hughes, E. A. Hulme, F. R. Hunt, G. A. Hunt, I. V. Hunt, S. J. Hunter, G. A. Hutchinson, A. P. Hutton, J. E. R. Hyson, L. J. W. Ingram, J. P. Ironside, E. R. James, W. Jamieson, D. M. Johns, J. H. Keeble, J. F. Kither, K. J. P. Laing, S. V. Langton, E. R. Latham, W. D. Layton, H. F. Lees, F. J. Livingstone, C. B. E. Lloyd, S. C. Lockwood, D. H. C. Lye, J. L. McAdam, F. J. McConnell, P. A. MacDougall, J. B. McIntyre, J. S. Mackereth, A. W. MacLaughlin, B. H. McLeod, I. U. MacMurchy, H. S. Mahoney, C. V. F. Manning, C. Marsden, W. H. Martin, C. E. Mayer, H. F. Meyer, W. M. Middleton, D. Miller, E. H. S. Morris, J. O. Moss, H. A. E. Moulder, S. Mowat, R. E. Neale, F. C. Neser, M. Newcomb, J. M. Nichol, C. S. Noble, J. W. Norton, A. C. Nye, D. J. A. O'Brien, M. H. Orcutt, H. C. M. Orpen, L. A. Palmer, D. Parker, V. S. Parker, J. L. Parren, A. B. Paton, C. McK. Payne, L. A. Payne, K. M. Pennington, H. E. Pettit, D. H. Phillips, H. Pickford, C. J. Pool, W. J. D. Porritt, J. W. Potts, A. G. Powell, F. R. Presland, T. T. Pritchard, W. G. Pudney, J. B. Purefoy, H. W. Querrie, C. S. Read, A. T. Reeve, H. B. Richardson, K. Rishworth, H. E. Robinson, H. G. Robinson, H. D. Roe, N. W. Restron, H. N. E. Row, R. S. Rucker, A. H. Rudd, J. Sangster, M. W. S. Shepherd, C. W. Skeet, F. Sidebotham, T. H. D. Silvers, E. W. Sims, A. B. Sneddon, L. G. B. Spence, H. K. Spoonley, B. Starfield, A. H. Stead, A. J. Stevens, J. G. Stevenson, H. J. Stone, A. V. Stupart, H. Svendsen, W. W. Symmons, I. M. Tatham, A. J. Taylor, A. L. T. Taylor, E. Thomas, J. H. Thompson, J. A. Tomlinson, A. C. Townend, D. P. Trollop, M. C. P. Tuckett, R. B. E. Turnbull, W. A. Tyrrell, T. A. Urwin, G. W. Waddington, G. W. Wall, C. F. Whistance, S. L. Whitehouse, L. A. Wilkins, C. H. Williams, E. F. Wilson, O. S. Wise, L. P. Woodill, H. J. Young, G. M. Yuill, J. G. H. de Roeper; June 21st.

London Gazette Supplement, July 7th.

The following appointments are made:—

Squadron Commander.—Lieut. (Temp. Capt.) J. A. G. de Courcy, M.C., R.A., from a Flight Comdr., and to be Temp. Maj. whilst so employed; June 4th.

Flying Officers.—Lieut. E. C. Barnard, Hereford R. (T.F.), and to be sec'd.; Dec. 3rd, 1916. 2nd Lieut. A. Newman, M.C., Essex R. (T.F.), and to be sec'd.; May 16th. Temp. Lieut. J. B. C. Madge, Gen. List, from a Flying Officer (Ob.); June 13th, with seniority from Aug. 5th, 1916. Temp. 2nd Lieut. (on prob.) D. Vaughan, Gen. List; 2nd Lieut. (on prob.) A. Wald, S.R.; Temp. 2nd Lieut. (on prob.) L. F. Lomas, Gen. List; Temp. 2nd Lieut. (on prob.) R. F. W. Moore, Gen. List; Lieut. T. I. L. Lloyd, Mon. R. (T.F.), from a Flying Officer (Ob.), with seniority from June 18th, 1916. 2nd Lieut. C. H. Jeffs, Bord. R. (T.F.), and to be sec'd. Temp. 2nd Lieut. (on prob.) F. G. Barker, Gen. List; Temp. 2nd Lieut. A. N. Barlow, attd. R. Fus., and to be transfd. to Gen. List; 2nd Lieut. (on prob.) W. W. Cook, S.R.; Temp. 2nd Lieut. (on prob.) N. P. Davis, Gen. List; June 14th. Temp. 2nd Lieut. (on prob.) N. H. Albury, Gen. List; Temp. 2nd Lieut. (on prob.) W. R. Bishop, Gen. List; Temp. 2nd Lieut. (on prob.) F. W. H. Oxley, Gen. List; June 15th. Temp. 2nd Lieut. (on prob.) A. J. Cassidy, Gen. List; 2nd Lieut. (on prob.) J. D. S. Munro, S.R.; Temp. 2nd Lieut. (on prob.) N. H. Thackrah, Gen. List; June 16th. Temp. 2nd Lieut. (on prob.) L. H. Paddle, Gen. List; 2nd Lieut. (on prob.) H. J. Forsaith, S.R.; Temp. 2nd Lieut. (on prob.) A. A. Crowson, Gen. List; Temp. 2nd Lieut. R. O. Purry, Gen. List; June 18th. Temp. 2nd Lieut. L.

Symour, R. W. Fus., and to be transd. to Gen. List; Temp. 2nd Lieut. (on prob.) H. C. Chambers, Gen. List; June 19th.

Equipment Officer, 3rd Class.—2nd Lieut. (on prob.) J. E. L. Wrench, S.R.; June 19th.

Memoranda.—To be Temp. 2nd Lieuts. (on prob.) for duty with R.F.C.:—J. J. O'Loughlin; May 14th. H. S. Alger, D. H. Clement, K. G. Courage, N. Feather, R. L. Finnis, H. C. Newton, F. M. Pepper, S. G. Yapp, G. A. Hill; June 20th. B. A. Higgins; June 29th.

Supplementary to Regular Corps.—The following 2nd Lieuts. to be Lieuts.:—(Temp. Capt.) N. G. McNaughton, F. C. A. Wright, W. B. Young, S. B. Lee, (Temp. Lieut.) W. Boag, G. C. Mills (Temp. Capt.) C. F. J. North, F. H. Whiteman, L. F. Hutcheon (Temp. Capt.) H. J. N. Drope, V. C. Gordon, R. K. Muir, A. C. Ferguson, F. M. Carter, C. E. Balayney, (Temp. Capt.) S. W. Duncley, E. D. L. Davies, C. Lambert, E. M. Smith, J. E. Wight, J. D. Hewett, F. W. Roberts, R. S. Jameson, (Temp. Capt.) S. W. Taylor, R. H. Timmis, J. M. Batting, D. Drover, G. R. Nicholson, W. M. Bevan, G. Gilling, W. Buckingham, M. C. R. F. Buckingham, H. J. Gibson, A. D. Pocock, C. N. Dore, H. F. Blake, (Temp. Lieut.) T. G. Mellanby, A. H. Chapman, P. V. Tanner, H. E. R. Fitchat (Temp. Lieut.) K. Arnold, G. Purvis-Russell-Balfour, Kinnear; June 1st. 2nd Lieut. (on prob.) W. B. Davies resigns his commission; July 8th. Temp. 2nd Lieuts. (on prob.), from Gen. List (R.F.C.) to be 2nd Lieuts. (on prob.):—H. R. Hogdson; Feb. 27th, 1916. F. S. Briggs, G. D. Heathorn, A. Wald; Mar. 17th.

General List (R.F.C.).—Temp. 2nd Lieut. R. P. Monico resigns his commission; July 8th. Temp. 2nd Lieut. R. T. Paton resigns his commission; July 8th.

London Gazette Supplement, July 9th.

The following appointments are made:—

Squadron Commander.—Capt. C. H. B. Blount, M.C., R.W. Surr. R., from a Flight Comdr., and to be Temp. Major whilst so employed; June 26th.

Flight Commanders.—From Flying Officers, and to be Temp. Capt. whilst so employed: Temp. Lieut. F. P. Holliday, Gen. List; June 15th. 2nd Lieut. (Temp. Lieut.) A. G. A. Davis, Devon R.; June 20th.

Flying Officers.—Temp. 2nd Lieut. H. S. Nichols, R. Muns. Fus. and to be transd. to Gen. List; April 21st. Lieut. S. L. Quine, Ches. R., S.R., and to be secd.; 2nd Lieut. J. Russell, Arg. and Sub'd. Highrs. (T.F.), and to be secd.; April 30th. Temp. 2nd Lieut. N. Crompton, Lan. Fus. and to be transd. to Gen. List; May 15th. 2nd Lieut. T. A. Thornton, Norf. R. (T.F.), and to be secd.; May 16th. 2nd Lieut. (on prob.) G. C. Stouss, S.R. (since killed in action); May 17th. Lieut. (Temp. Capt.) J. E. D. Neale, Leic. R. (T.F.),

and to be secd.; Temp. 2nd Lieut. (on prob.) A. S. Kelly, Gen. List; June 17th. Temp. 2nd Lieut. (on prob.) P. R. Cann, Gen. List; Temp. 2nd Lieut. (on prob.) H. W. Dawson, Gen. List; Temp. 2nd Lieut. (on prob.) W. Hubbard, Gen. List; June 18th. Temp. Lieut. J. B. Solomon, Oxf. and Bucks L.I., from a Flying Officer (Ob.), with seniority May 25th; Temp. 2nd Lieut. (on prob.) G. H. Ellis, Gen. List; 2nd Lieut. (Temp. Capt.) A. R. Hudson, Yeo. (T.F.), and to be secd.; Temp. 2nd Lieut. (on prob.) J. B. Maudsley, Gen. List; June 19th. Lieut. G. C. Levick, K.R. Rif. C., from a Balloon Officer; 2nd Lieut. E. N. D. Barr, M.C., R.F.A., Spec. Res., from a Flying Officer (Ob.), seniority Aug. 15th, 1916; Temp. 2nd Lieut. (on prob.) H. R. Large, Gen. List; Capt. D. F. Massy, Ind. Cav.; Temp. 2nd Lieut. G. F. Ward, Gen. List, from a Flying Officer (Ob.), seniority June 22nd, 1916; 2nd Lieut. A. A. Mitchell, R.F.A. (T.F.), and to be secd.; Temp. 2nd Lieut. (on prob.) P. D. Robins, Gen. List; Temp. 2nd Lieut. (on prob.) J. S. Walthew, Gen. List; June 20th. Temp. 2nd Lieut. (on prob.) J. B. Sanderson, Gen. List; 2nd Lieut. (on prob.) G. N. Moore, S.R.; Temp. 2nd Lieut. (on prob.) G. McIntyre, Gen. List; June 21st.

Flying Officer (Observer).—The surname of Lieut. J. C. McKeever, Can. Inf., is as now described, and not as in the *Gazette* of May 30th.

Balloon Company Commanders (graded as Flight Commanders, and to be Temporary Captains whilst so employed).—2nd Lieut. (Temp. Lieut.) B. G. L. Ellis, R. Guernsey Mila., from a Balloon Officer; June 9th. 2nd Lieut. (Temp. Lieut.) J. A. Cochrane, R. Sco. Fus. (T.F.), from a Balloon Comdr. (graded as a Balloon Officer); June 16th.

Balloon Commander (graded as a Balloon Officer).—Temp. Lieut. R. S. Lardner, Bodf. R., from a Balloon Officer; May 21st.

Adjutant.—Temp. Capt. A. M. Lester, Midd'x. R., vice Temp. 2nd Lieut. (Temp. Lieut.) J. Rubie, D. Gds.; May 18th.

Equipment Officers, 1st Class.—Lieut. G. E. Godsave, Lond. R. (T.F.), from the 2nd Cl., and to be Temp. Capt. whilst so employed; June 25th.

2nd Class.—And to be Temp. Lieuts. whilst so employed: Temp. 2nd Lieut. F. B. Luget, Gen. List, from a Flying Officer; 2nd Lieut. E. C. Colman, Wilts R., S.R., from a Flying Officer (Ob.); June 25th.

Memoranda.—Hon. F. W. S. McLaren, late 2nd Lieut., R.F.C., S.R., to be Temp. 2nd Lieut. (on prob.) for duty with R.F.C. (June 18th, but with seniority from July 5th, 1916).

Supplementary to Regular Corps.—2nd Lieut. C. G. Hetherington to be Lieut.; Oct. 5th, 1916.

AIRCRAFT WORK AT THE FRONT, OFFICIAL INFORMATION.

British.

General Headquarters, June 20th.

"The weather was less favourable for flying yesterday, but work in conjunction with our artillery was continued, with good results. One German aeroplane was brought down in air fighting and one other hostile machine was shot down by our anti-aircraft guns. Two of our aeroplanes failed to return."

General Headquarters, June 22nd.

"Work in conjunction with our artillery was continued by our aeroplanes yesterday, in spite of bad weather, and good results were obtained. In air fighting one German aeroplane was brought down and six others were driven down out of control. Three of our machines are missing."

General Headquarters, June 24th.

"In air fighting yesterday two German aeroplanes were brought down and one was driven down out of control. Another hostile machine was shot down in our lines by our anti-aircraft guns. One of our aeroplanes is missing."

General Headquarters, June 25th.

"There was heavy fighting in the air yesterday. Five German aeroplanes were brought down by our machines, and five others were driven down out of control. Another hostile machine was shot down by our anti-aircraft guns. Five of our aeroplanes are missing."

General Headquarters, June 26th.

"In air fighting yesterday two German aeroplanes were brought down and three other hostile machines were driven down out of control. One of our aeroplanes is missing."

War Office, June 27th.

"*Salonica.*—The R.F.C. and R.N.A.S. have bombed Provista and Razolivos (east of the southern end of Lake Tabanos), Demirhissar, and other places south of the Rupel Pass, and Furka (west of Lake Doiran), causing damage to the enemy's camps and dumps."

General Headquarters, June 27th.

"Much successful work was accomplished by our aeroplanes again yesterday. In air fighting five German machines were brought down and two others were driven down out of control. In addition, one hostile machine was shot down by fire from the ground."

"None of our aeroplanes is missing."

General Headquarters, June 28th.

"Activity in the air continued yesterday. One enemy aeroplane was brought down in air fighting, and two others were driven down out of control. In addition, two hostile machines were shot down, and two others driven down by fire from the ground. Four of our aeroplanes are missing."

War Office, June 28th.

"*Mesopotamia.*—On the 22nd inst. our aeroplanes bombed one of the few remaining Turkish river steamers, obtaining at least one direct hit with a 65-lb. bomb. On June 25th hostile aeroplanes bombarded our camps without doing any damage. On the following day we retaliated by dropping 24 bombs on the enemy's camps at Tekrit. Several direct hits were observed on tents, which were destroyed, and other bombs exploded close amongst the enemy's tents, inflicting damage. All our machines returned safely."

War Office, June 29th.

"*Egypt.*—Successful air raids have recently been carried out; 650 lb. of bombs were dropped on the supply depot at Tul Keram on June 23rd, severely damaging rolling stock, and the station buildings; on the same date 1,180 lb. of bombs were dropped on the aerodrome at Ramleh. On June 26th some 30 bombs were dropped on the military establishments near Jerusalem."

General Headquarters, June 29th.

"One German aeroplane was brought down yesterday in air fighting. None of our machines is missing."

General Headquarters, June 30th.

"Several encounters took place in the air yesterday between our aeroplanes and large formations of hostile machines. As a result of the fighting five German aeroplanes were brought down and four others were driven out of control. One other enemy machine was shot down by fire from the ground. One of our aeroplanes is missing."

General Headquarters, July 3rd.

"Hostile aerial activity has shown a marked increase during the past few days. Successful artillery work and bombing raids were carried out yesterday

by our aeroplanes. One German aeroplane was brought down in our lines by gunfire. Three more were brought down by air fighting, and two others driven down out of control. One of our machines is missing."

General Headquarters, July 4th.

"In air fighting yesterday three enemy machines were brought down and five others were driven out of control. Another hostile machine was shot down by our anti-aircraft guns. One of our aeroplanes failed to return."

War Office, July 6th.

"*Salonica.*—Our aeroplanes have bombed Drama, Poma and Angista stations, the aerodrome at Drama, and camps and dumps at other places. Altogether during the month of June 19 tons of explosives were dropped by us, and considerable damage was inflicted. A hostile machine was brought down by our anti-aircraft guns near Akindzali (north-east of Lake Doiran), and was afterwards destroyed by artillery fire and aeroplane bombs."

General Headquarters, July 7th.

"There was much aerial fighting yesterday, chiefly on the front between Lens and Ypres. In this area the enemy's machines were encountered in large numbers, one formation being composed of as many as 30. Despite this pronounced activity on the enemy's part, we bombed his aerodromes during the day, causing damage, and carried out successfully artillery work and photography. The activity was continued by bombing during the night, in which the enemy showed more enterprise than he has hitherto done. He dropped 144 bombs on our side of the line, our bombing machines meanwhile dropping nearly three times that number on his side. In the fighting during the day eight hostile machines were brought down and six others were driven out of control. Five of our machines are missing."

General Headquarters, July 8th.

"Yesterday the enemy again displayed the greatest activity in the air, and fighting was continuous throughout the day. Hostile aircraft worked in large formations, which were frequently broken up by our pilots. Our airmen earned out a number of successful raids, in the course of which the enemy's aerodromes, depôts and troops were attacked with bombs and machine-gun fire, and considerable damage was caused. Six enemy machines were brought down in combat and ten more were driven down out of control. Eight of our machines are missing."

General Headquarters, July 9th.

"Owing to the thick mist and low clouds no aerial activity was possible on either side yesterday."

French.

Paris, June 20th.

"*Salonica.*—There has been activity on the part of the British air service, which successfully bombarded the enemy encampments in the Struma valley and to the north of Petritch."

Paris, June 21st.

"Fourteen aeroplanes and one German captive balloon were destroyed on our front during the period June 8th—20th. Eleven of these machines were brought down by our pilots in air fights, and three were brought down by the fire of our machine and anti-aircraft guns. Seven other enemy machines were seriously hit and fell in their own lines. During the same period our air squadrons carried out numerous raids and bombardments, notably, the railway station of Bensdorf, the factories of Hayange, Joef, and Moyeuve, the blast furnaces of Burbach and of the Sarre Valley, the railway stations of Béthenville, Chatelet-sur-Retourne, Rethel, Mezieres, and Charleville, Molsheim, bivouacs in the valley of the Suipe, ammunition dumps in the region of Laon, &c. Thirteen thousand kilogrammes of bombs were dropped during these expeditions, which inflicted important damage on the enemy's establishments."

Paris, June 25th.

"*Salonica.*—Allied aviators have successfully bombarded numerous enemy encampments."

Paris, June 27th.

"Yesterday, at about 8 p.m., German aircraft dropped several bombs on Nancy. There were no casualties, and no material damage was done."

Paris, June 28th.

"It is confirmed that on June 25th an Albatros attacked by one of our aeroplanes fell into its own lines east of Gratreuil. Yesterday an Albatros was brought down south-east of Moronvillers."

"A German aeroplane brought down by one of ours fell to the south of the Beaumaris Wood, south of Craonne. The wounded pilot and the uninjured observation officer were taken prisoner."

Paris, June 29th.

Salonica.—British airmen caused big explosions and fires at Sovjak, near Demirhisar, and among the sheds at Bogdaml."

Paris, July 1st.

Salonica.—British aeroplanes bombarded the station at Porna, as well as enemy encampments situated in the region of Demir Hissar."

Paris, July 5th.

"A German aeroplane hit by our mitrailleuse fire fell to the north-west of Morouvilliers."

Paris, July 7th.

"During the period from June 21st to June 30th 19 enemy aeroplanes and a captive balloon were brought down by our chasing planes. In addition, 14 German machines which were seriously damaged fell into their own lines. During the bombardment operations carried on during the same period the railway stations of Recicourt and Avricourt and the enemy establishments in the region of Beine and of the Suipe Valley were bombed. Last night enemy aeroplanes dropped several bombs in the region of Epernay and in the region south of Nancy."

"During the bombardment carried out yesterday by enemy aeroplanes in the region of Nancy several bombs fell on a hospital. Three persons were killed, including a child, and four were injured. Several persons were also wounded at Epernay. During the night of July 6th-7th our bombarding aeroplanes carried out, in particularly brilliant conditions, a series of aerial expeditions. Eighty-four machines, whose crews rivalled one another in endurance and skill, took the air in the course of these operations. Some of these raids had for their objectives towns situated far in the interior of the enemy territory as a reprisal for the bombardments carried out by the Germans on our open towns. The following are the details:—Between 12.15 and 1.10 a.m. 11 of our aeroplanes flew over Treves, on which they rained 2,650 kilogrammes (over 2½ tons) of shells. Seven conflagrations were observed in the town, one of great violence being in the central stations."

"About the same time six machines bombarded Ludwigshafen, causing great damage. Among others, buildings belonging to the great Badische aniline dye factory were the prey of flames."

"Another of our aeroplanes, piloted by Sergeant-Major Gallois, flew as far as Essen and threw projectiles on buildings of the Krupp works. Leaving at 9.20 p.m., Sergeant-Major Gallois returned at 4.15 a.m., having travelled 700 kilometres (438 miles)."

"Military establishments in the environs of Coblenz, the station of Hirson, the railway west of Phalsberg, and the station of Thionville were also bombarded."

"Another series of operations took place above the enemy lines and gave excellent results. A fire broke out in the station of Dun-sur-Meuse. A munitions depot blew up at Bantheville. The station of Machatly and the establishments of Aconroy were set on fire. Altogether our machines dropped 13,455 kilogrammes (about 13½ tons) of bombs. Two of our machines did not return."

Salonica.—British aviators bombarded with success the stations of Porna and Angista, 20 kilometres east of Seres. In the Cerna bend the enemy attempted a surprise attack, which was repulsed. There were rather lively artillery actions in the region of Ruma and in that of Monastir."

Belgian.

Havre, June 23rd.

"The bad weather somewhat impeded the activity of our aviators."

Havre, July 3rd.

"An enemy aeroplane was brought down by our artillery between Dixmude and Keyem."

Havre, July 8th.

"Our airmen have displayed very great activity. On July 3rd three enemy aeroplanes were brought down, two of them by Adjutant Thieffry in less than two minutes, thus accomplishing the first Belgian 'double event.' An enemy machine was also brought down by our special guns."

Russian.

Petrograd, June 22nd.

"There were aerial operations on the European front. On his return from an aerial engagement Captain Kruten, one of our most gallant pilots, fell and was killed while descending at an aerodrome. During the course of numerous aerial fights with Austro-German airmen Captain Kruten brought down six aeroplanes, all of which fell on our territory."

Petrograd, June 24th.

"On the Baltic Sea on June 22nd, six enemy seaplanes carried out two raids at the southern extremity of the island of Oesel, dropping 33 bombs on ships lying in the roadstead and on the shore batteries, but causing no loss or damage. The attacks were repelled by the fire of our Fleet and sea batteries."

Petrograd, June 29th.

"Fusillades and aerial operations are reported on the European front. Six enemy aeroplanes bombarded the town of Tecuci without doing any damage."

Petrograd, July 3rd.

"On June 28th a German Zeppelin dropped 12 bombs on the town of Venden. A German battle-plane brought down one of our machines, which fell in the village of Savitch (on the River Berezina). The airmen, 2nd Capt. Shnoor and Sub-Lieut. Kulikovsky, were killed."

Petrograd, July 5th.

Baltic Sea.—On July 3rd nine enemy aeroplanes executed two flights over the southern extremity of the Island Osel. Twenty-four bombs were dropped on the batteries, hangars and buildings. The enemy's attacks were diverted by the concentrated fire of our naval units and shore batteries, which prevented the bombs from hitting their mark. There is no loss or damage."

Petrograd, July 7th.

"In the direction of Balovitch, in the region south-west of Svoditch, one of our observation balloons was set on fire by a German aeroplane. An enemy machine was brought down here by machine-gun fire. The German airmen perished. A German battleplane in the region of the village of Bartonishki (on the River Berezina) brought down one of our aeroplanes. The aviators, Lieut. Trotsky and N.C.O. Savateyeff, perished."

Baltic Sea.—On July 6th a squadron of enemy hydroplanes conducted a flight in the region Tserelian, the Island of Osel, and the town of Arensburg. Nineteen bombs were dropped on the batteries, hangars and other structures. All the bombs missed their mark and no damage was done. The enemy machines disappeared on being met by the fire of our warships and naval batteries."

Black Sea.—On the night of July 5th three of our fastest cutters made a raid in the Lake Razin (south of the mouth of the Danube). Having made a landing under fire, the crew captured a machine gun and the breech of a field gun, and took two Bulgarian soldiers prisoners, after having bayonnetted 12 others. On returning the cutters were subjected to an attack by a hydroplane in the Dranoff Canal."

Petrograd, July 8th.

"In the region of Presovce a German aeroplane was brought down."

Petrograd, July 9th.

"Our airmen dropped bombs on the railway station of the town of Pinsk, causing conflagrations. A squadron of German aeroplanes made a nocturnal flight over Dvinsk, and dropped a large number (several poods) of bombs."

Italian.

Rome, June 19th.

"Numerous air squadrons supported the artillery, dropping a large quantity of bombs in the immediate rear of the enemy's lines. All the machines returned safely."

Rome, June 20th.

"Numerous air squadrons supported the artillery (in the capture of Hill 2,105 in the Mount Ortigara area), dropping a large quantity of bombs in the immediate rear of the enemy lines. All the machines returned safely."

Rome, June 23rd.

"On the 19th one enemy aeroplane was forced by our airmen to descend near Aisovizza and another machine was brought down yesterday evening on the reverse of Mount S. Marco."

Rome, June 24th.

"In an air fight an enemy aeroplane was forced to land in his own lines near Mount Armentera (Val Sugana)."

Rome, June 26th.

"Aircraft were very active yesterday. One enemy machine was brought down by battery fire, and fell within its own lines north of Asiago. During the night our aircraft bombed the military works at Nebrasina and Prosecco. All the machines returned safely."

Rome, June 29th.

"Enemy airmen displayed great activity during the evening. They were effectively engaged by our anti-aircraft batteries."

Rome, June 30th.

"During the day one of our aeroplanes, east of Gorizia, brought down an enemy machine and forced another to land. One of our air squadrons effectively bombed enemy huts in the Monte Hermada region. During the night enemy machines dropped bombs on our lines of communication on the Lower Isonzo and on various localities on the northern Adriatic coast. There were no victims and only very slight damage was done. As a reprisal, our machines bombed the enemy aviation grounds at Prosecco."

"On Friday night a squadron of enemy aeroplanes coming from the sea and flying at a great height dropped incendiary and high explosive bombs on the lagoon of Venice, on the city itself, and on Murano and Chioggia. There were no casualties."

Rome, July 7th.

"On the night of the 6th enemy aeroplanes which attempted a raid of Valona were repulsed by our anti-aircraft guns."

Rome, July 8th.

"One of our big raiding squadrons accompanied by chasing planes went yesterday afternoon to Idria and dropped 2½ tons of explosives on the military mercury extracting works, causing damage and fire. All our airmen returned safely. On the Carso during air fights two enemy machines were brought down in our lines, while a third fell within its own lines."

Rome, July 9th.

Albania.—On the evening of the 7th another enemy air raid was repulsed by our fire. The numerous bombs dropped by the enemy did no damage and there were no victims."

German.

Berlin, June 23rd.

"Since June 15th, 23 enemy aeroplanes have been brought down in aerial battles and five by our defensive firing from the earth. Four captive balloons of the enemy have also been brought down."

Berlin, June 24th.

"In the Wyttschaete bend three captive balloons were shot down by us. The enemy also lost three aeroplanes."

Berlin, June 25th.

"Three aeroplanes and three captive balloons belonging to the enemy were shot down yesterday."

Berlin, June 26th.

"During aerial encounters Cavalry Capt. Baron von Richthofen was victorious in overcoming during the past two days his fifty-fourth, fifty-fifth and fifty-sixth opponents, and Lieut. Allmenroeder yesterday overcame his thirtieth opponent."

Berlin, June 30th.

"During the afternoon an English company, supported by aeroplanes flying at a low altitude, broke into our trenches to the south-east of Armentières. They were at once driven out by a counter-attack."

Berlin, July 3rd.

"Six enemy aeroplanes were shot down, one of them by Cavalry Capt. Baron von Richthofen."

Berlin, July 7th.

"The aerial activity was very lively throughout the day and night. Three enemy aeroplanes and one captive balloon were brought down."

Eastern Front.—Our chaser-echelons attacked the retreating Russian masses from the air."

Berlin, July 8th.

"On the night of July 6th-7th, in addition to bomb-dropping near the front, there were encounters on German territory. Enemy airmen dropped in all over 100 incendiary bombs in the Westphalian industrial region, in Trier and the neighbourhood, and also on Mannheim, Ludwigshafen and Rodalben. There was no military damage caused. One of the enemy aeroplanes fell into our hands. In aerial encounters and through anti-aircraft fire at the front the enemy yesterday lost nine aeroplanes. One of these was shot down by Lieut. Wolf, who thereby attains his 33rd aerial victory."

Austrian.

Vienna, June 21st.

"In some sectors of the Galician and Volhynian front aerial activity was livelier."

Vienna, June 25th.

"North-east of Brzezany an enemy captive balloon was set on fire by our shells."

Vienna, June 28th.

"On June 26th Capt. Heyrowsky shot down two airmen over the Vippacco Valley."

Vienna, June 30th.

"Enemy airmen dropped several bombs in the vicinity of Trieste."

Bulgarian.

Sofia, June 21st.

"Aerial activity is reported from the whole front. Two enemy aeroplanes were brought down in the Monastir region after a fight in the air."

Turkish.

Constantinople, June 29th.

"Three enemy machines which attacked Jerusalem on June 26th (7 were brought down). Our reconnoitring patrols, which were approaching two of these machines, having again been attacked by enemy aeroplanes, captured the machine guns of these aeroplanes and burnt the machines."

"The British have lost six aeroplanes, two in air fights and four by our artillery fire. The activity of our airmen on the Siani front is worthy of admiration, and deserves to be recorded."

LEGAL INTELLIGENCE.

**Lighting Restrictions and Municipality Liability.
Morrison v. City of Sheffield.**

In the Court of Appeal on July 5th, the Lord Chief Justice and Lord Justices Pickford and Scrutton heard an appeal from a judgment of Mr. Justice Rowlatt sitting with a special jury at the Leeds Assizes on March 19th, 1917, which raised a question as to the liability of municipal corporations for accidents during the enforcement of non-lighting orders.

In 1902 the defendants, as the urban authority of Sheffield, caused trees to be planted in various highways, among others in the Abbeyville Road. These trees were fenced round with iron guards or spikes which were some three inches out of the perpendicular. The height of these spikes from the ground was 5 ft. 2½ ins., the tops of the spikes being bent in an outward direction.

On April 3rd, 1916, the Chief Constable of Sheffield, acting under an order under the Defence of the Realm regulations, ordered that, until further notice, all the street lights in Sheffield should be extinguished after a certain hour.

A few days after this order took effect the plaintiff, shortly after 9 p.m., was in Abbeyville Road shopping, and crossed the road. Owing to the total extinguishment of the street lighting he had to feel his way in the darkness. On reaching the other side of the road he came in contact with one of the iron spikes fencing a tree, and the sight of one eye was practically destroyed. In consequence he suffered loss in business and incurred heavy expenses through his injuries. He accordingly brought this action, and the jury were asked two questions by the learned judge:—1. "Was the guard dangerous in the circumstances of the darkness that existed?" and 2. "Ought the defendants, if they exercised reasonable foresight, to have taken reasonable measures to have neutralised the danger before the date of the accident?"

The jury answered both of these questions in the affirmative, and awarded the plaintiff £660 16s. damages for personal injuries.

The defendants appealed from the judgment entered in accordance with the verdict on the grounds of misdirection, absence of evidence of negligence, and that the verdict was against the weight of evidence.

In dismissing the appeal the Lord Chief Justice, after stating the facts, said that it had been contended that there was no evidence of any breach of duty on the part of the defendants, and the basis of the argument was that the trees and guards had been placed by the defendants under the authority of section 43 of the Act of 1890. They contended that, having erected these guards, which were admittedly safe in normal circumstances, there was no further degree of care imposed upon them by reason of the Lighting Order under which the town was placed in a state of darkness, but in his (his Lordship's) opinion this contention was unsound. The defendants could not contend that, when authority was given to place the trees and guards, they were not bound to exercise their powers with reasonable care, having regard to a reasonable degree of protection which the public were entitled to expect. Neither could it be contended that because there was no nuisance or want of reasonable care on the part of the defendants before the Lighting Order came into operation it was not necessary for them to take further steps afterwards. There was an obligation on the defendants to use reasonable care for the whole of the time during which they maintained the guards in the public highway, and they were not entitled to allow them to become dangerous to those who used the highway.

Whether or not they had exercised reasonable care was a matter for the jury to decide. Whether or not during the 17 days which elapsed between the date of the Lighting Order and the date of the accident the defendants ought to have taken steps to prevent danger to the public was again a matter for the jury to decide, and it could not be said that there was no evidence before the jury on which they could decide as they had done.

His Lordship had come to the conclusion that it was the duty of the defendants to continue to keep the guards of the trees so as not to be dangerous. He was not unmindful of the great stress and pressure brought to bear upon local authorities at the present time, but that would not absolve them from exercising reasonable care in using the powers entrusted to them.

Lord Justice Scrutton concurred.

□ □ □ □ SIDE-WINDS.

It should be superfluous to ask anybody in these times of saving whether they are wasting anything, yet from what Messrs. Ruston, Proctor are asking in connection with their gas-producer plant: "Are you wasting your sawdust, small timber and shavings?" it would appear there must still be a few of them left. And in this connection from personal observation we may state that many, if not actually wasting things, are certainly not utilising such products as they may produce to the best advantage. Many there are who are doing the exact reverse, and as instance, one very large factory "up north" is running the whole of its vast machinery on producer gas generated from timber waste. The longest day is past, and winter is metaphorically coming up the garden path. With the varying "decisions" regarding coal, that emanate apparently with every full moon, who knows what may happen? Perchance large consumers will have to organise the better-spared members of their staff into a coal queue. Messrs. Ruston, Proctor and Co., of Lincoln, make gas producers that eat waste and deliver power. A postcard to them need not necessarily mean alterations in your works; but, on the other hand, it might mean a big alteration in saving. *Verb. sap.*

WHILST on the subject of heat, how are you heating your glue, the water for your canteens, melting your wax and your solder, drying your varnish, even providing hot water for your first aid department? Accidents will happen in the best of regulated workshops. If you are using electricity for these purposes and need additions to your plant, Premier Electric Heaters of Bradford Street, Birmingham, may be able to help you. This firm are experts in their own particular lines, and their catalogue gives every particular, even down to the amount of current consumed by each heater. Not every maker is so frankly frank.

THE National Chemical Works, Ltd., of Stanley Road, South Acton, have produced a compound which they call "Permanite," and the uses to which it can apparently be put are too numerous to mention *in extenso*. The makers claim that it is applied like an ointment, sets as hard as stone, and resists the action of acid, oil, petrol, turpentine, or any fluid of a kindred nature. Highly polished surfaces,

such as brass, steel, nickel or aluminium, appear to have no power to prevent its adhesion, and it will bind almost any article to the metal surface. The makers suggest, as amongst innumerable uses it may be put to, the making of oiltight joints between cylinder block and crankcase, or joints between the top and bottom halves of the crankcase. A line to the South Acton office will bring full particulars as speedily as the post office can just now get through its work.

IN the big increases in aerial construction work that are coming along it is worth remembering before they get full up that Motor Mac's, of Bournemouth, have over 26,000 sq. ft. of flooring covered by the most up-to-date machinery for aeroplane construction and the manufacture of aeroplane parts. Also, that they have splendid facilities for sheet metal work, grinding, welding, as well as all classes of machine work and forgings.

SUCCESS has attended Mr. Max Worms in his enterprise in respect to his entry into the manufacture of aeroplanes in his lately established works. It is but a few months since he started his factory at Twickenham, yet progress has been such that he has already had to find and remove to more commodious premises. Nothing suitable being available in the vicinity of London, he has found accommodation in the huge works of Messrs. J. and A. Steane, of Bournemouth. To this beautiful locality plant and machinery have already been removed, and Mr. Worms has vacancies for fitters, erectors and tool makers. Also there is an opening for a first-class foreman fitter. Mr. Worms reminds us that he still maintains sole directorship of the business, and we wish him continued success under the new conditions.

AN eventful day ended on Saturday in an eventful evening at the Pillar Hall Restaurant, Victoria Station, when Mr. Albert Cole, the genial head of Messrs. Cole and Son, of Hammersmith, invited his numerous employees to be his guests at a dinner well served and much appreciated by those entertained. The atmosphere was redolent of goodwill, and Mr. Purser, who proposed the health of the chairman in a very concise manner, gave prominence to a predominant

trait in Mr. Albert Cole's character, viz., the consideration of the welfare of his employees, who were his first interest. To them he was known, albeit not irreverently, as "Old King Cole." Mr. Cole, in responding, took very little kudos to himself for the advancement the firm had made, stating it was mainly due to the energies and loyalty of the staff, ably led by Mr. McKay, which had enabled them to attain the position they now enjoyed. Altogether a really delightful evening, appreciated by one and all, not forgetting the excellent musical programme.

FROM the Rotax Motor Accessories Co., Ltd., of Rotax Works, Willesden Junction, we learn that they have acquired the business of Messrs. H. T. Saunders and Co., Ltd., Lozells, Birmingham. This will be carried on as the branch works, i.e., Rotax Brass Works, 85, Clifford Street, Lozells, Birmingham. All communications, however, should be sent to head offices at Willesden Junction as usual. It may be noted that a working arrangement has existed between this company and Messrs. H. T. Saunders for some years.

The Aircraft Workers' Sports.

THE second annual sports of the combined workers in aircraft manufacture will be held at Stamford Bridge Grounds, Fulham, on Saturday, July 21st, 1917, at 3 p.m. It is to be sincerely hoped that this year the weather will be more favourably disposed towards these hard workers on their one day's pleasure and sport than was the case last year. It will be within the memory of most how incessant rain on the last occasion made things distinctly uncomfortable for all concerned, although it had not the slightest effect in preventing the whole of the programme being carried through. This year's meeting is a Championship one, many valuable trophies having been put up by the heads of the firms concerned, and many subsidiary prizes of worth presented by friendly and affiliated trades.

Some 24 events are down for competition, and those thinking of competing are reminded that this year there will be no entries taken at the post. All entrants must make application to have their names added at least one week before the date of trial.

Princess Iwa (Maori), New Zealand, will sing the National Anthem and Elgar's "Land of Hope and Glory," accompanied by the Police Band, "T" Division, whilst the same band will render selections during the afternoon.

The price of admission is just the nimble sixpence.

H.H. Princess Helena Victoria has kindly consented to present the prizes.

Both the men and women aircraft workers have had strenuous times, and very long hours in the past, and will probably have to work even harder in the near future. One and all should gather round to help towards ensuring that on this one day they shall have a bumper meeting and enjoy themselves without stint. We can promise there will be plenty to interest and amuse the general public in whatever sphere may be their activities.

R.N.A.S. Work in Belgium.

THE following announcements have been issued by the Admiralty:—

"July 4th.

"During the night of the 2nd and morning of the 3rd instant bombing raids were carried out on Bruges Docks and on Lichtervelde ammunition depôts by R.N.A.S. machines. Several tons of bombs were dropped in all, and good results were observed. All our machines returned safely."

"July 5th.

"During the night of the 3rd-4th bombing attacks were carried out by R.N.A.S. machines on the aerodrome at Ghisteltes and Niemunster, also on the Ostend seaplane sheds and on a train at Zarren. Several tons of bombs were dropped. All our machines returned safely."

"July 8th.

"A bombing flight of R.N.A.S. machines carried out a raid last evening (July 7th) on Ghisteltes aerodrome. Although heavily attacked by a hostile formation, bombs were successfully dropped on the objectives. All our machines returned safely."

Kromonetz to Salonica by Air.

CAPT. SMOLIANINOFF, the Russian pilot, is reported from Petrograd as having flown from the neighbourhood of Kromonetz (Volhynia) to Salonica, covering a distance of about 440 miles.

The Italian Raid on Idria.

DETAILS of the brilliant air raid at Idria on July 7th are to hand from Italian headquarters: A squadron of Italian planes bombarded on the afternoon of the 7th the plant for the extraction of minerals at Idria, a small village of the Carniola, about 40 miles to the west of Lubiana. These works are some of the most important in Europe, and are at the present time turned exclusively to military uses. From them, in fact, the Central Empires extract all the mercury which they need for the making of explosives. The raid accomplished by the Italian aviators could not, as far as direct observation can judge, have had a more brilliant result. Twelve warplanes, accompanied by chasing planes, took part in the action, all of which reached Idria and bombarded the works of the mine with mining shrapnel of 260 mm. and 162 mm., and with incendiary bombs. Over 2½ tons of explosives were dropped. The central power station and an F-shaped building to the north-east were destroyed. Several fires were also observed by the aviators. The enemy's anti-aircraft batteries directed a very intense fire against the Italian aeroplanes. Some of them were hit by shrapnel, but all returned to their sheds without casualties.

On July 9th, three enemy planes were reported brought down, the first by Capt. Baracca (his 13th), the second by Second Lieut. Sambonet, the third by Sergt. Rizzotto. The first of these was probably hit in its bomb magazine, for this exploded and wrecked the machine.

PUBLICATIONS RECEIVED.

The Elementary Principles of Wireless Telegraphy. By R. D. Bangay. Parts I and II. London: The Wireless Press, Ltd. Price: Part I, 1s. 6d.; Part II, 2s.

The Year-Book of Wireless Telegraphy and Telephony, 1917 London: The Wireless Press, Ltd. Price 3s. 6d. net. (postage 7d.).

NEW COMPANIES REGISTERED.

CROYDON AVIATION AND ENGINEERING CO., LTD., 54, Great Tower Street, E.C.—Capital £5,250, in 5,000 preference shares of £1 each and 5,000 ordinary shares of 1s. each. Manufacturers of devices and machinery, &c., for aerial and water navigation or progression, engineers, motor-car manufacturers, &c. First directors: A. C. Moschonas and C. H. Fieldsted.

INTENSIVE MACHINING CO., LTD.—Capital £3,000, in £1 shares. Acquiring business of engineers and manufacturers of munitions and aeroplane parts carried on by E. P. J. Pavot and T. N. Bayens. First directors: A. Ravelli, T. N. Bayens, and E. P. J. Pavot.

Aeronautical Patents Published.

Applied for in 1916.

The numbers in brackets are those under which the Specifications will be printed and abridged, &c.

Published July 5th, 1917.

9,534. J. R. PORTER. Aeronautical Machines. (106,888.)
17,021. G. E. BRADSHAW. Propellers of aeroplanes, hydroplanes, airships, &c. (106,944.)
18,518. W. Y. BAKER AND MARTINSYDE, LTD. Splicing of ropes. (106,956.)

Published July 12th, 1917.

8,306. T. SLOPER. Pneumatic cushioning-devices for aircraft. (107,050.)
9,995. T. E. C. WILSON. Flying-machines. (107,099.)

If you require anything pertaining to aviation, study "FLIGHT'S" Buyers' Guide and Trade Directory, which appears in our advertisement pages each week (see pages xxxvi, xxxvii, and xxxviii).

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